5-3895-341-14

TM 5-3895-341-14

TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LISTS

ROLLER, TOWED, VIBRATING, AIRMOBILE, GASOLINE ENGINE DRIVEN

ESSICK MODEL VR55TM

FSN 3895-252-5276

This copy is a reprint which includes current pages from Change 3.

HEADQUARTERS, DEPARTMENT OF THE ARMY

OCTOBER 1971

D 101.11:

READEX FICHE best copy available

SAFETY PRECAUTIONS

BEFORE OPERATION

Before starting engine or operating any of the components, insure that no loose tools, bars, or parts are lying in or on any part of the equipment as they could cause serious damage to equipment or bodily injury to the personnel.

Before starting engine, insure that all operating levers and controls are in neutral, or disengaged, and the equipment is properly secured or choked. Failure to follow these rules could result in damage to equipment and serious injury to personnel.

Exercise care when servicing batteries, to prevent electrolyte from splashing on skin or clothing. Wash contaminated skin areas and change clothing to avoid serious burns.

Before connecting any battery cables to batteries, insure all electrical switches are in OFF position. Damage to wiring, lamps, voltage regulator, or other accessories can be caused by flash current through electrical system.

Always provide good ground contact between fuel container and fuel tank, while refueling, to avoid igniting fuel vapors with a static spark.

Before refueling, insure that all fire fighting equipment is serviceable and in its proper location.

DURING OPERATION

Never wear loose fitting clothing or hanging appendages from person while inspecting running engine, moving shafts, belts, vibrating roller, or like machinery.

Check all gages and instruments after starting engine. Correct or report any condition that may cause injury to personnel if operation is to be continued.

Keep clear of moving machinery at all times and avoid bodily injury.

Use precaution and do not perform maintenance on engine or equipment while it is operating, and use the simple and fundamental rules of safety when operating the vibrating unit.

Do not refuel while equipment is in operation.

During engine operation, all fire fighting equipment should be serviceable and in standby position. Avoid use of open flame in vicinity of these operations.

Never operate or tow above rated speed. Utilize a guide.

Always wear gloves to prevent contacting cold or hot metal with bare hands.

Do not touch engine or accessories with bare hands during operation or before they have cooled sufficiently. Severe burns can be caused through carelessness.

Do not operate the equipment in an enclosed area. Exposure to exhaust fumes and gases can be dangerous. Symptoms are headaches, dizziness, drowsiness and coma. To correct this condition, move to a more ventilated area. Insure that fresh air is provided.

Operate the vibrating equipment only on solid surfaces. Severe damage or cracks will result if operated on hollow flooring, building floors, evacuation tunnels, or any type construction floor material that requires no vibrating packing as a result of the operating equipment.

AFTER OPERATION

Always correct or report any conditions that may result in injury to personnel, before operation is resumed.

Before leaving equipment, operator must be sure that operating controls are disengaged and proper operating instruments and controls are disengaged and proper operating instruments and controls are turned OFF, and that equipment is properly secured.

TM 5-3895-341-14
*C 3

CHANGE
No. 3

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC *12 November 1980*

Operator's, Organizational, Direct Support and General Support Maintenance Manual (Including Repair Parts and Special Tools List) FOR ROLLER, TOWED, VIBRATING, AIRMOBILE, GASOLINE ENGINE DRIVEN ESSICK MODEL VR55TM NSN 3895-00-252-5276

Current as of April 1980

TM 5-3895-341-14, 14 October 1971, is changed as follows:

Inside front cover add the following under "DURING OPERATION."

WARNING

The noise level of the roller, when in operation, could be detrimental to your hearing. Personnel operating or making adjustments on the engine should use ear protection.

Line 34. First sentence is changed to "Operate the vibrating equipment only on earthen-and-fill-type material."

Page 1-1. Paragraph 1-3 is superseded as follows:

1-3. Reporting Errors and Recommending Improvements

You can help improve this manual. If you find any mistake or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to: Commander, US Army Tank-Automotive Materiel Readiness Command, ATTN: DRSTA-MBP, Warren, Michigan 48090. A reply will be furnished to you.

Page 2-1. Paragraph 2-4*c* is added as follows:

c. An operator's helper should be used during operation of the roller when available. The mission of the helper is to e: gage the power take-off operating lever (fig. 2-1) on the roller just before the prime mover begins to start in motion, and to disengage the power take-off operating lever as soon as the prime mover comes to a stop.

Page 2-2.

Following paragraph 2-7 title add the following:

CAUTION

Do not tow the roller in tandem during compacting operations.

Paragraph 2-7*b*(5) is superseded as follows:

(5) When towing the roller, maintain a slow steady speed of approximatey 1- to 2-miles per hour.

CAUTION

Once compaction has been achieved, do not continue to vibrate the materials because the roller could be damaged by excessive vibration and shock to the precision parts. For the same reason, do not vibrate roller while standing still, except for test purposes. Position roller on a suitable insulator (old tire casing) while roller is standing still during test procedure.

NOTE

While compacting, it is advisable to make one slow pass rather than two passes at twice the speed. The resultant compaction is achieved when the roller moves either forward or backward. The number of passes required for good compaction will vary with the thickness of the lift being rolled, and the compactibility of the material.

Page 3-1, section III is superseded in its entirety by the following:

*This change supersedes change 1, 11 February 1972 and change 2, 11 May 1973.

Section III. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

3-3. General

Preventive maintenance is detecting/correcting problems before they happen, or fixing little problems before they become big problems. Table 3-1 contains a list of preventive maintenance checks and services to be performed by operator/crew. Attention to these checks and services will increase the useful life of the equipment, but every possible problem cannot be covered in the PMCS. You need to be alert for anything that might cause a problem.

3-3.1. Maintenance Forms and Records

Every mission begins and ends with the paperwork. There isn't much of it, but you have to keep it up. The forms and records you fill out have several uses. They are a permanent record of the services, repairs, and modifications made on your equipment. They are reports to organizational maintenance and to your commander. They are a checklist for you when you want to know what is wrong with the equipment after its last use, and whether those faults have been fixed. For the information you need on forms and records, see TM 38-750.

3-4. Preventive Maintenance Checks and Services

a. Do your (B) PREVENTIVE MAINTENANCE just before you operate the equipment. Pay attention to the CAUTIONS and WARNINGS.

b. Do your (D) PREVENTIVE MAINTENANCE during operation. (During operation means to monitor the roller and its related components while they are actually being operated).

c. Do your (A) PREVENTIVE MAINTENANCE right after operating the equipment. Pay attention to the CAUTIONS and WARNINGS.

d. Do your (W) PREVENTIVE MAINTENANCE weekly.

e. Do your (M) PREVENTIVE MAINTENANCE once a month.

f. If something doesn't work, troubleshoot it with the instructions in this manual or notify your supervisor.

g. Always do your preventive maintenance in the same order, so it gets to be a habit. Once you've had some practice, you'll spot anything wrong in a hurry.

h. If anything looks wrong and you can't fix it, write it on your DA Form 2404. If you find something seriously wrong, report it to organizational maintenance RIGHT NOW.

i. When you do your preventive maintenance, take along the tools you need to make all the checks. You always need a rag or two.

WARNING

Dry cleaning solvent, SD-2, used to clean parts is potentially dangerous to personnel and property. Do not use near open flame or excessive heat. Flash point of solvent is 138° F.

(1) *Keep it clean:* Dirt, grease, oil, and debris only get in the way and may cover up a serious problem. Clean as you work and as needed. Use drycleaning solvent (SD-2) to clean metal surfaces. Use soap and water when you clean rubber or plastic material.

(2) *Bolts, nuts, and screws:* Check that they are not loose, missing, bent, or broken. You can't try them all with a tool, of course, but look for chipped paint, bare metal, or rust around bolt heads. If you find one loose, tighten it or report it to organizational maintenance.

(3) *Welds:* Look for loose or chipped paint, rust, or gaps where parts are welded together. If you find a bad weld, report it to organizational maintenance.

(4) *Electric wires and connectors:* Look for cracked or broken insulation, bare wires, and loose or broken connectors. Tighten loose connectors and make sure the wires are in good condition.

(5) *Hoses and fluid lines:* Look for wear, damage, and leaks. Make sure clamps and fittings are tight. Wet spots show leaks, of course, but a stain around a fitting or connector can also mean a leak. If a leak comes from a loose fitting or connector, tighten it. If something is broken or worn out, report it to organizational maintenance.

j. It is necessary for you to know how fluid leakage affects the status of your equipment. The following are definitions of the types/classes of leakage you need to know to be able to determine the status of your equipment. Learn and be familiar with them and REMEMBER — When in doubt, notify your supervisor!

Leakage Definitions for Operator/Crew PMCS

CLASS I	Seepage of fluid (as indicated by wetness or discoloration) not great enough to form drops.
CLASS II	Leakage of fluid great enough to form drops but not enough to cause drops to drip from item being checked/inspected.
CLASS III	Leakage of fluid great enough to form drops that fall from the item being checked/inspected.

CAUTION

Equipment operation is allowable with minor leakage (Class I or II). Of course, consideration must be given to the fluid capacity in the item/system being

checked/inspected. When in doubt, notify your supervisor.
When operating with Class I or II leaks, continue to check fluid levels as required in your PMCS.
Class III leaks should be reported to your supervisor or to organizational maintenance.

Table 3-1. Operator/Crew Preventive Maintenance Checks and Services

B-Before D-During A-After W-Weekly M-Monthly

Item no.	Interval B	D	A	W	M	ITEM TO BE INSPECTED Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if:
						NOTE PERFORM WEEKLY AS WELL AS BEFORE PMC'S IF: *a.* You are the assigned operator but have not operated equipment since the last weekly. *b.* You are operating the equipment for the first time.	
1						GENERAL	
	●					a. Visually check for loose wiring, damaged piping, or faulty hoses.	
	●	●				b. Look for evidence of fluid leakage (oil or fuel).	Class III leaks or any fuel leakages are found.
						WARNING Check before removing from tow vehicle.	
				●		c. Check front and rear stands for proper operation.	
2	●					ENGINE CRANKCASE Check dipstick for proper oil level. Add oil as necessary to FULL mark.	
3	●					VIBRATORY SHAFT BEARINGS Lubricate daily (10 pumps of grease gun every 4 hours).	
4	●					DRIVE BELT Check for fraying or cracking.	Belt is missing, frayed, or cracked.
5						CONTROLS AND INSTRUMENTS (Check for proper indication and operation).	
		●				*a.* AMMETER Slight (+) charge	
		●				*b.* HOURMETER Check hourmeter operation	
		●				*c.* ENGINE OIL PRESSURE 30-40 PSI normal operation	Engine oil pressure gage indicates abnormal operation.
		●				*d.* CONTROLS (i.e. power takeoff lever, engine throttle) Check for proper operation	Controls do not operate properly.
6		●				AIR CLEANER Check air cleaner indicator; if red, clean and service element.	
7				●		FUEL STRAINER Check sediment bowl for dirty fuel or water, drain if dirt or water is present.	
8				●		BATTERIES Check level of electrolyte. If low, fill with clean water (distilled if possible) to split ring. In freezing weather, run engine at least 15 minutes after adding water.	

Page 4-1, Section II is superseded in its entirety by the following:

Section II. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

4-3. General

Preventive maintenance is detecting/correcting problems before they happen, or fixing little problems before they become big problems. Table 4-1 contains a list of preventive maintenance checks and services to be performed by organizational maintenance personnel. Attention to these checks and services will increase the useful life of the vibrating roller, but every possible problem

cannot be covered in the PMCS. You need to be alert for anything that might cause a problem. If anything does look wrong, and you can't fix it, write it on a DA Form 2404 and report it to your supervisor. Be sure to record any corrective action.

4-3.1. Organizational Preventive Maintenance Checks and Services

a. Perform the checks and services at the intervals shown in table 4-1.

(1) Do the (Q) checks and services once each three months.

(2) Do the (S) checks and services twice a year, or each six months.

(3) Do the (A) checks and services once each year.

(4) Do the (B) checks and services once each two years.

(5) Do the (H) checks and services at the hour interval listed.

b. If the vibrating roller doesn't work properly and you can't see what is wrong, refer to table 4-2 for troubleshooting instructions.

WARNING

Dry cleaning solvent SD-2, used to clean parts, is potentially dangerous to personnel and property. Do not use near open flame or excessive heat. Flash point of solvent is 138° F.

c. Make cleanup a part of your preventive maintenance. Dirt, grease, oil, and debris may cover up a serious problem. Use drycleaning solvent (SD-2) to clean metal surfaces. Wipe off excess grease and spilled oil. Use soap and water when you clean rubber or plastic material.

d. Watch for and correct anything that might cause a problem with the equipment. Somethings you should watch for are:

(1) Bolts, nuts, and screws that are loose, missing, bent, or broken.

(2) Welds that are bad or broken.

(3) Electric wires and connectors that are bare, broken, or loose.

(4) Hoses and fluid lines that leak, or show signs of damage or wear.

e. You should know how fluid leaks affect the status of your equipment. Learn and be familiar with the following definitions of the types/classes of leakage. Remember — when in doubt, notify your supervisor!

Leakage definitions for PMCS are:

CLASS I	Seepage of fluid (indicated by wetness or discoloration) not great enough to form drops.
CLASS II	Leakage of fluid great enough to form drops but not enough to cause drops to drip from the item being checked/inspected.
CLASS III	Leakage of fluid great enough to form drops that fall from the item being checked/inspected.

CAUTION

Equipment operation is allowable with minor leakage (Class I or II). Of course, consideration must be given to the fluid capacity in the item/system being checked/inspected. When in doubt, notify your supervisor.

When operating with Class I or II leaks, continue to check fluid levels as required by the PMCS.

Class III leaks should be corrected before releasing equipment for operation.

Table 4-1. Organizational Preventive Maintenance Checks and Services

Legend

Q-Quarterly A-Annually H-Hours
S-Semiannually B-Biennially MI-Miles

Item no.	Interval						ITEM TO BE INSPECTED Procedure
	Q	S	A	B	H	MI	
							NOTE PERFORM OPERATOR/CREW PMCS PRIOR TO OR IN CONJUNCTION WITH ORGANIZATIONAL PMCS IF: *a.* There is a delay between the daily operation of th equipment and the organizational PMCS. *b.* Regular operator is not assisting/participating.
1					100		OIL FILTER Change oil and filter element.
2					100		FUEL STRAINER Inspect strainer for dirt, water, or sediment. Clean if dirty.
3	•						AIR CLEANER Check filter element and if dirty, clean or replace element as required.
4					500		SPARK PLUGS Check for proper gap (0.030 inch), dirt or defects. Clean, adjust, or replace.
5					500		GOVERNOR

Table 4-1. Organizational Preventive Maintenance Checks and Services - Continued

Item no.	Interval Q	S	A	B	H	MI	ITEM TO BE INSPECTED Procedure
							Check for proper operation. Adjust if required.
6					500		MAGNETO a. Inspect for worn or pitted contacts. Replace or adjust (0.015 inch gap). b. Lube cam wick.
7	●						CLUTCH ASSEMBLY Check for proper operation. Adjust as needed.
8	●						DRIVE BELT Check for wear, damage, and proper tension. Replace belt if worn out or damage is evident. Adjust tension if required. Proper tension will allow squeezing, with fingers, midway between the pulleys to approximately 2-1/2 to 3 inches.
9	●						BATTERIES a. Remove corrosion from connectors and posts. b. Check specific gravity of electrolyte in each cell. Reference TM 9-6140-200-14.
10	●						SCRAPER BLADE Check for secure mounting and excessive wear. Replace if adjustment can no longer be made.

Page 4-10.

Paragraph 4-12*a*(2) after level add the following:

Insure that the drive pulley on the roller is alined with the pulley on the engine.

NOTE

The engine pulley should be directly above the drive pulley on the roller before installing or adjusting the drive belts.

Paragraph 4-12*a*(3), second sentence is superseded as follows:

When the belt sides are approximately 2-1/2 to 3-inches apart, the belt is adjusted properly.

Following paragraph 4-12*a*(3) add the following:

(4) To adjust the horizontal alinement of the engine, loosen the four upper nuts (1) that secure the engine mounting plate in position. Accurate alinement can be accomplished either with a level or by measuring the distance between the engine base (3) and the top of the roller frame.

NOTE

If the vertical alinement of the drive pulleys is required, this can be accomplished by moving the drive pulleys in or out on the clutch output shaft as required. The pulley is a split collar, tapered-type, and can be moved easily.

Page 5-2.

Following paragraph 5-5*a*(5) add the following:

WARNING

Disconnect battery at positive terminal prior to removal of nut (5) listed in step (6) below.

After paragraph 5-5*a*(8) add the following:

NOTE

When replacing the engine, transfer the following items to the new engine: Oil high temperature transmitter and wiring, fuel inlet fitting, clutch assembly adapter flywheel and shield, front engine mount, gage control panel and wiring, and exhaust muffler extension.

Page A-1.

Paragraph A-3 is superseded by the following:

A-3. Painting.

AR 746-1 Packaging of Army Materiel For Shipment and Storage

Paragraph A-5, line 4 is superseded by the following:

TM 9-6140-200-14 Operator's, Organizational, Direct Support and General Support Maintenance Manual Storage Batteries Lead-Acid Type.

following:

TB 740-97-2 Preservation of USAMECOM Mechanical Equipment for Shipment and Storage.

Following paragraph A-6 add the following:

A-7. Demolition

TM 750-244-3 Procedures for Destruction of Equipment to Prevent Enemy Use (Mobility Equipment Command).

A-8. Operation

M5-331A Utilization of Engineer Construction Equipment: Volume A; Earthmoving, Compaction, Grading, and Ditching Equipment.

Page D-4, figure D2, item 4, column (2). Change "5306-753-4322" to "5305-00-753-4322".

Page D-5, figure D3.

Item 1.
Column (2). Change "3030-758-9704" to "3030-00-625-2989".
Column (3). Change "BELT, DRIVE 4-3V850 (11288)" to "BELT, DRIVE: BANDED, W/FOUR 3V RIBS, 4R3V850 (20796)".
Item 7, column (2). Change "5305-475-0631" to "5305-00-782-9494".

Page D-6, figure D4, item 9, column (2). Add "5330-00-139-7103".

Page D-7, figure D5.
Item 3, column (2). Change "5306-753-4322" to "5305-00-753-4322".
Item 4, column (2). Add "6140-00-137-5843".
Item 5, column (2). Change "6150-257-1472" to "6140-00-257-1472".
Item 8, column (2). Add "6140-00-405-4523".

Page D-8, figure D7.
Item 6, column (2). Change "5305-450-0385" to "5306-00-450-0385".
Item 17, column (2). Change "5305-716-6318" to "5305-00-939-9205".

Page D-11,
Figure D1, item 20, column (2). Change "5306-753-4322" to "5305-00-753-4322".
Figure D2, item 4, column (2). Change "5306-753-4322" to "5305-00-753-4322".

Page D-12, figure D3.
Item 1.
Column (2). Change "3030-758-9704" to "3030-00-625-2989".
Column (3). Change "BELT, DRIVE 4-3V850 (11288)" to "BELT, DRIVE: BANDED W/FOUR 3V RIBS, 4R3V850 (20796)".

Following item 4.
Column (1). Add "PAFZZ".
Column (2). Add "5305-00-071-2240".
Column (3). Add "SCREW, CAP, 1/4-20 X 1-3/8 in. lg MS90725-11 (96906)".
Column (4). Add "EA".
Column (5). Add "3".
Columns (6) through (9). Add "*".
Column (10)*(a)*. Add "D3".
Column (10)*(b)*. Add "4.1".
Column (1). Add "PAFZZ".
Column (2). Add "5310-00-582-5965".
Column (3). Add "WASHER, 1/4 in. MS35338-44 (96906)".
Column (4). Add "EA".
Column (5). Add "3".
Columns (6) through (9). Add "*".
Column (10)*(a)*. Add "D3".
Column (10)*(b)*. Add "4.2".
Item 6, column (2). Change "5315-432-4337" to "5315-00-849-7237".
Item 7, column (2). Change "5305-475-0631" to "5305-00-782-9494".
Item 14.
Column (1). Change "PF" to "XBFZZ".
Column (2). Delete "5310-423-8022".

Page D-13.
Item 21, column (2). Change "3895-200-6367" to "5360-00-200-6367".
Item 26, column (2). Change "3010-362-2954" to "5360-00-362-2954".
Item 27.
Column (1). Change "PF" to "XBFZZ".
Column (2). Delete "5315-281-7549".
Item 32, column (2). Change "3820-802-2038" to "4720-00-802-2038".
Item 34, column (2). Change "3010-366-7185" to "2010-00-366-7185".

Page D-14, item 43, column (2). Change "5340-282-4986" to "5365-00-282-4986".

Page D-15, figure D4, item 9, column (2). Add "5330-00-139-7103".

Page D-16, figure D5.
Item 3, column (2). Change "5306-753-4322" to "5305-00-753-4322".
Item 4, column (2). Add "6140-00-137-5843".
Item 5, column (2). Change "6150-257-1472" to "6140-00-257-1472".
Item 8, column (2). Add "6140-00-405-4523".

Page D-17.
Following figure D-6, item 7.
Column (1). Add "PAFZZ".
Column (2). Add "5306-00-225-8504".
Column (3). Add "SCREW, CAP, 5/16-18 X 2 in. lg MS90275-40 (96906)".
Column (4). Add "EA".
Column (5). Add "3".
Columns (6) through (9). Add "*".
Column (10)*(a)*. Add "D6".
Column (10)*(b)*. Add "7.1".
Column (1). Add "PAFZZ".
Column (2). Add "5310-00-407-9566".
Column (3). Add "WASHER, 5/16 IN. MS35338-45 (96906)".
Column (4). Add "EA".
Column (5). Add "3".
Columns (6) through (9). Add "*".
Column (10)*(a)*. Add "D6".
Column (10)*(b)*. Add "7.2".
Item 16, column (2). Change "2530-425-5828" to "3040-00-425-5828".
Item 17, column (2). Change "2530-432-1661" to "3040-00-432-1661".
Item 18, column (2). Change "3040-425-5897" to "2805-00-425-5897".

Page D-18, figure D7, item 6, column (2). Change "5305-450-0385" to "5306-00-450-0385".

Page D-19, figure D7, item 17, column (2). Change "5305-716-6318" to "5305-00-939-9205".

Page D-22, figure D3 is superseded as follows:

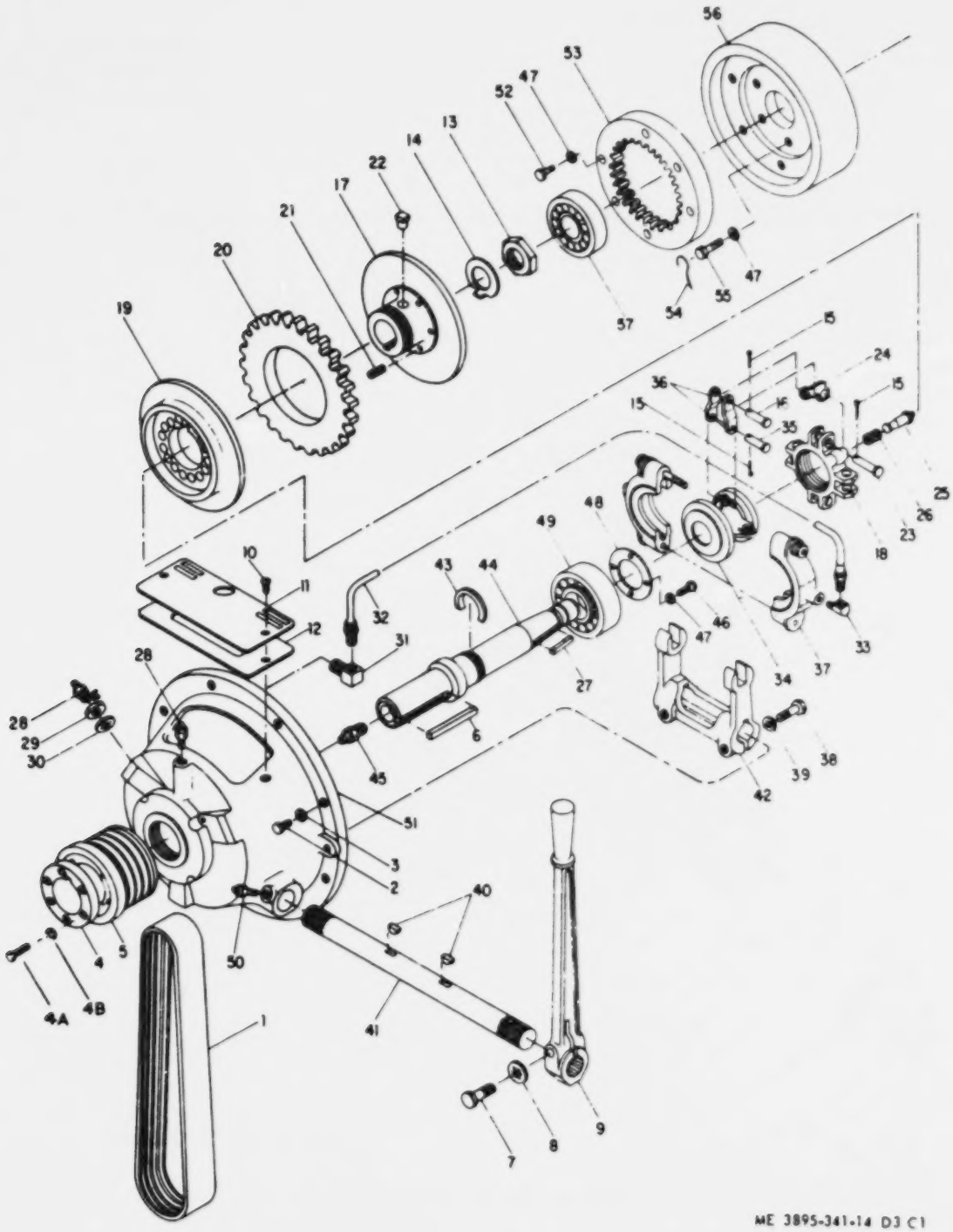

Figure D-3. Power take-off assembly.

Page D-25, **figure D6 is superseded as follows:**

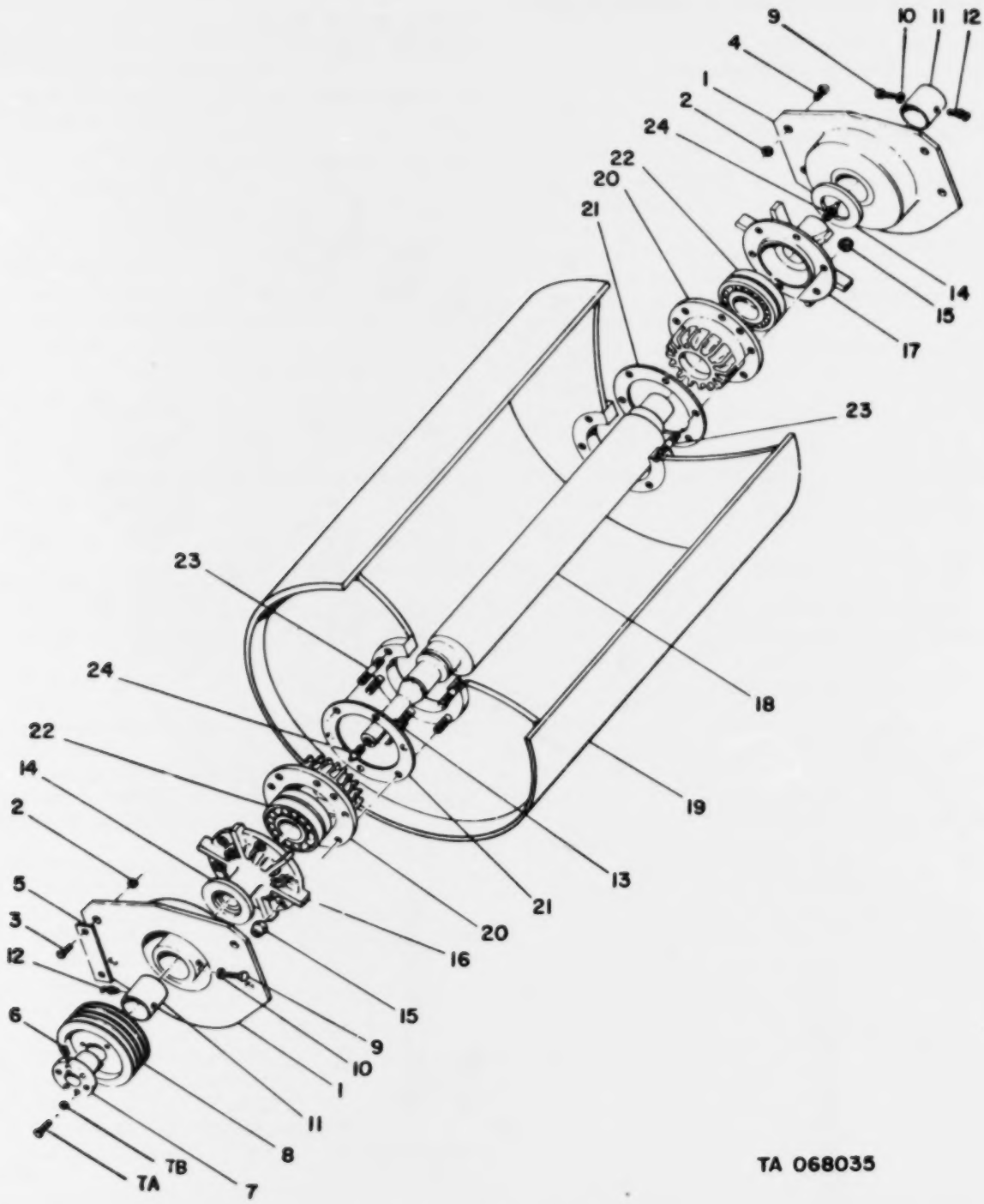

Figure D-6. Roll and shaft assembly.

All changes, additions, or deletions of stock numbers, manufacturer's codes, and part numbers with this change should be appropriately reflected in the index.

By Order of the Secretary of the Army:

E. C. MEYER
General, United States Army
Chief of Staff

Official:

J. C. PENNINGTON
Major General, United States Army
The Adjutant General

Distribution:
To be distributed in accordance with DA Form 12-25B, Organizational Maintenance requirements for Paver, Bituminous.

TECHNICAL MANUAL
No. 5-3895-341-14

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D. C., *14 October 1971*

OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST

ROLLER, TOWED, VIBRATING, AIRMOBILE, GASOLINE ENGINE DRIVEN

ESSICK MODEL VR55TM

FSN 3895-252-5276

Current as of 29 September 1971

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

a. This manual is published for the use of the personnel to whom the Essick Company Model VR55TM Roller is issued. It contains information on the operation and organizational, direct and general support maintenance of the equipment.

b. Numbers in parentheses on illustrations indicate quantity. Numbers preceding callouts on illustrations indicate the preferred maintenance sequence.

c. Refer to TM 740-90-1 (Administrative Storage of Equipment) for information and instructions pertaining to organizational administrative storage.

d. Refer to TM 750-244-3 (Procedures for Destruction of Equipment to Prevent Enemy Use) for information and instructions on destruction of equipment to prevent enemy use.

1-2. Forms and Records

Maintenance forms, records and reports, which are to be used by maintenance personnel at all maintenance levels are listed in and prescribed by TM 38-750.

1-3. Reporting of Errors

Report of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded direct to the Commanding General, U. S. Army Mobility Equipment Command, ATTN: AMSME-MPP, 4300 Goodfellow Boulevard, St. Louis, Mo. 63120.

Section II. DESCRIPTION AND DATA

1-4. Description

The Essick Model VR55TM Roller is a single, smooth drum, vibratory towed vehicle, designed to compact soil to high density. It is powered by a 10 H. P. Military Standard Gasoline Engine Model 2A042-3. Vibrations are delivered to the ground by a rotating eccentric shaft within the drum. The vibrations are isolated from the main frame by use of two large rubber mounts. The roller has a front draw bar with adjustable front towing hitch.

1-5. Differences in Models

This manual covers the Essick Model VR55TM only.

1-6. Identification and Tabulated Data

a. Identification. The roller has four identification and instruction plates.

(1) Identification Plate—specifies the nomenclature, manufacturer's name and serial number, contract number and FSN number. It is located on right side of lower front frame member (fig. 1-1).

(2) Transportation Plate—specifies the nomenclature, tie-downs, lifting eyes, overall length, height and width, shipping weight and cubage. It is located on right side of lower front frame member (fig. 1-1).

(3) Instruction Plate—specifies the procedure for starting and operation of controls, It is located on top of belt guard (fig. 1-1).

(4) Engine Plate—located on the engine's air shroud (fig. 1-1). This is a Military Standard Engine (TM 5-2805-258-14 for further information).

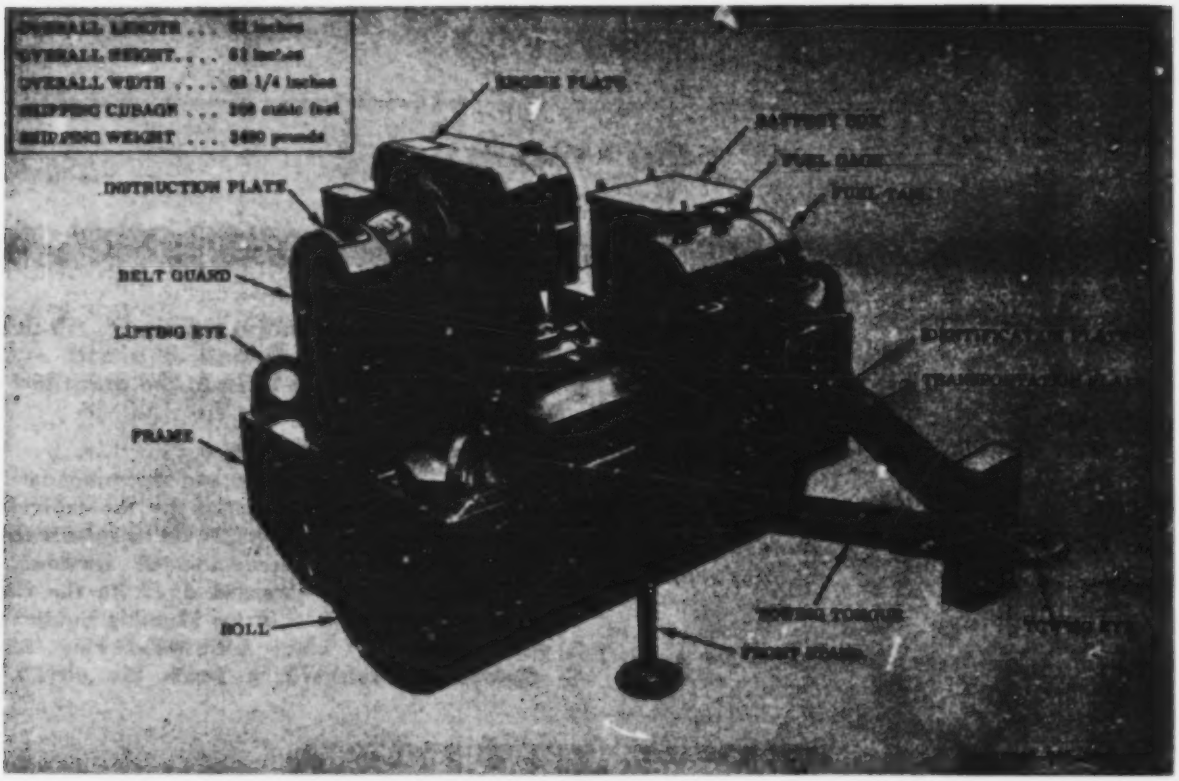

OVERALL LENGTH . . . 61 inches
OVERALL HEIGHT . . . . 61 inches
OVERALL WIDTH . . . . 60 1/4 inches
SHIPPING CUBAGE . . . 100 cubic feet
SHIPPING WEIGHT . . . 2400 pounds
ENGINE PLATE
INSTRUCTION PLATE
BELT GUARD
LIFTING EYE
FRAME
ROLL

Figure 1-1. Roller, three-quarter right front view.

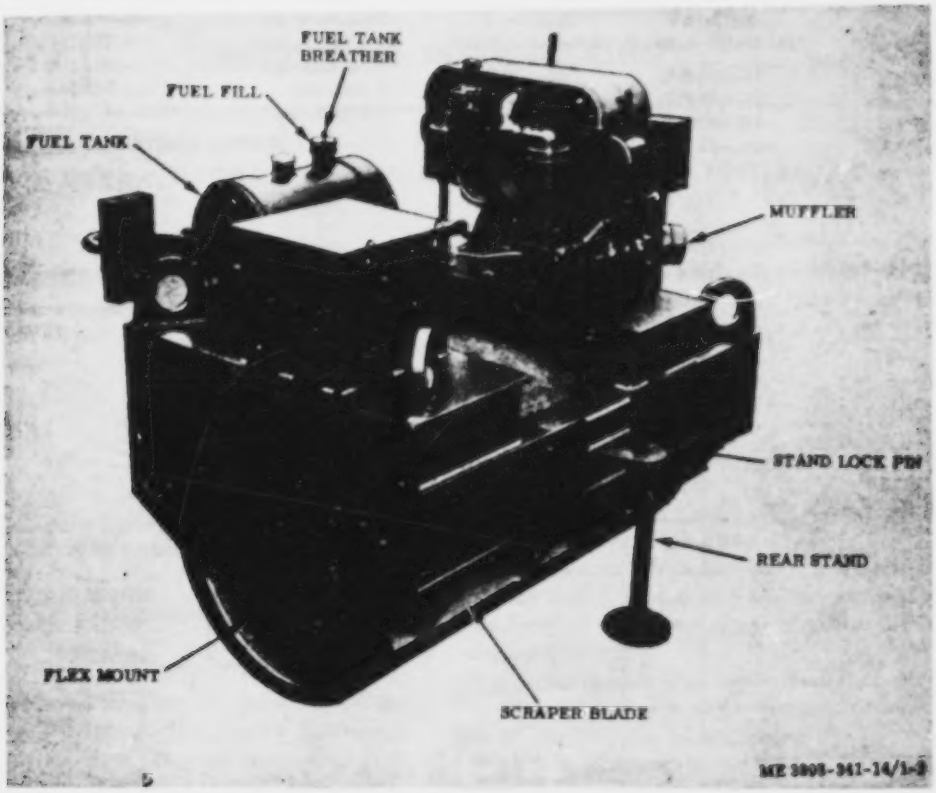


Figure 1-2. Roller, three-quarter left rear view.

b. Tabulated Data.

(1) *Roller.*

Manufacturer	Essick Manufacturing Co.
Model	VR55TM
Type	Vibrating Towed
Normal Towing Speed	1½ M. P. H.
Maximum Towing Speed	3 M. P. H.
Roll Diameter	30 inches
Roll Width	55 inches
Weight	3,460 lbs.
Vibrating Force	10,300 lbs.
Vibrations per Minute	1,300 to 1,600
Engine RPM—Full Throttle	3550

(2) *Engine.* This is the Military Standard Engine Model 2A042-3, FSN 2805-872-5971. For all data and maintenance requirements, consult TM 5-2805-258-14 and TM 5-2805-258-24P.

(3) *Accessory items.*

Fuel Gage	
Manufacturer	Rochester Gauges, Inc.
Model	6680-L12-H70
Hourmeter	
Manufacturer	Hamilton Watch Co.
Model	771
Ammeter	
Manufacturer	Stewart Warner
Model	359L
Oil Pressure Gauge	
Manufacturer	Stewart Warner
Model	505T
Power Take-Off	
Manufacturer	Twin Disc, Inc.
Model	C106SP6-3372
Air Inlet Housing	
Manufacturer	Alton Iron Works
Model	FSN 2805-895-3050
Muffler	
Manufacturer	Wisconsin Motor Corporation
Model	WD-66
Toggle Switches	
Manufacturer	Kulka Electric Corporation
Model	MS-35058-29
Model	MS-35058-30
Model	MS-35059-23
Pulleys	
Manufacturer	Dayco
Model	4-3V36-QD
Model	4-3V80-QD
Drive Belt	
Manufacturer	Dayco
Model	4R / 3V-850

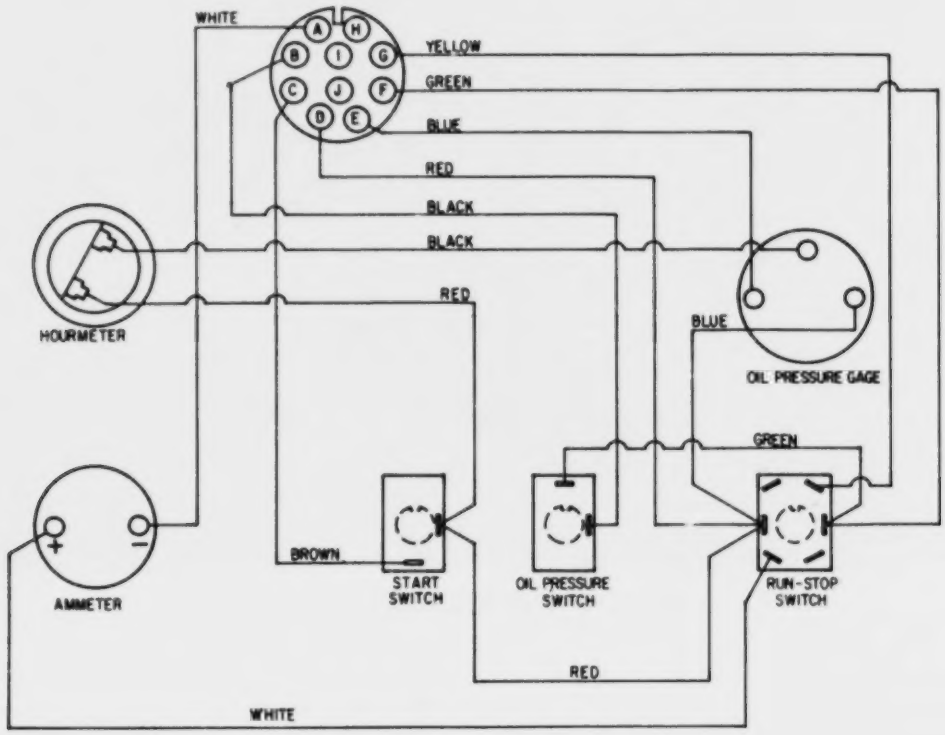
(4) *Capacities*

Fuel Tank	10 gallons

(5) *Nut and bolt torque data.*

	SAE Gr. 2 (no marks on head)	*SAE Gr. 5 (3 marks on head)*
3/8 inch dia	14—24 ft-lb.	26—36 ft-lb.
7/16 inch dia	25—35 ft-lb.	45—55 ft-lb.
1/2 inch dia	40—50 ft-lb.	70—80 ft-lb.
9/16 inch dia	61—71 ft-lb.	105-115 ft-lb.
5/8 inch dia	88—98 ft-lb.	145—155 ft-lb.
3/4 inch dia	145-155 ft-lb.	245—255 ft-lb.
7/8 inch dia	197—207 ft-lb.	373—383 ft-lb.
1 inch dia	295—305 ft-lb.	578—588 ft-lb.
1⅛ inch dia	469—479 ft-lb.	777—787 ft-lb.

(6) *Wiring diagram.* Refer to figure 1-3.



ME 3895-341-14/1-3

Figure 1-3. Wiring diagram.

CHAPTER 2

OPERATING INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF MATERIAL

2-1. Inspection and Servicing Equipment

Visually inspect entire roller for loss of parts or damage. Check engine assembly for secure mounting. Check drive belt for proper tension (para 4-12). Check engine for lube oil and fuel tank for fuel supply. Check that battery cells are full.

Section II. CONTROLS AND INSTRUMENTS

2-2. General

This section describes the various controls and instruments and provides the operator / crew sufficient information to insure proper operation of the roller.

2-3. Controls and Instruments

a. "Run-Stop" Switch. This switch is shown in figure 2-1. It is a toggle switch and allows the engine to run when in the "up" position and stops the engine by grounding in the "down" position.

b. Oil Pressure Switch. This switch (fig. 2-1) is a toggle switch that is normally ON in the "down" position and momentarily OFF in the "up" position.

When starting the engine it is held in the "up" position until oil pressure shows on the oil pressure gauge.

c. Start Switch. This switch is shown in Figure 2-1. It is a toggle switch that is normally OFF in the "down" position and momentarily ON in the "up" position. This is the engine starting switch and is held in the "up" position to start the engine.

d. Oil Pressure Gauge. This gauge is shown in Figure 2-1. It indicates the engine oil pressure, and has a range of 0 to 60 PSI. Normal operating pressure is approximately 35 PSI.

e. Ammeter Gauge. This gauge is shown in Figure 2-1. It indicates if the engine is charging or discharging and has a range of minus 15 to plus 15 amperes.

f. Hourmeter. This meter is shown in Figure 2-1. It indicates the total engine running time in hours and tenths of an hour.

g. Oil Temperature Switch. This switch is located in the engine oil pan, at the accessory end of the engine. It is wired to the magneto and will stop the engine if the oil reaches excessively high temperatures.

h. Power Takeoff Operating Lever. This lever shown in Figure 2-1. It engages and disengages the clutch located within the power takeoff.

i. Fuel Level Gauge. This gauge is shown in Figure 1-1. It indicates the amount of fuel in the fuel tank.

Section III. OPERATION UNDER USUAL CONDITIONS

2-4. General

a. The instructions in this section are published for the information and guidance of personnel responsible for the operation of the roller.

b. The operator must know how to perform every operation of which the roller is capable. This section contains instructions on starting and stopping the roller, on operation of the roller, and on coordinating the basic motions to perform the specific tasks for which the equipment is designed. Since nearly every job presents a different problem, the operator may have to vary given procedures to fit the individual job.

2-5. Starting

a. Preparation for Starting.

(1) Perform the preventive maintenance services.
(para 3-4)

(2) Lubricate the roller as specified in the LO 5-3895-341-12.

(3) Insure the fuel shutoff valve (fig. 4-3) is in "open" position.

(4) Place power takeoff operating lever (fig. 2-1) in disengaged position.

(5) Place engine throttle in idle position (TM 5-2805-258-14).

b. Starting

(1) Place "Run-Stop" Switch in "Run" position (fig. 2-1).

(2) Place, and hold, oil pressure and start switches in "up" position.

(3) Release start switch as engine starts.

(4) Release oil pressure switch when pressure on oil pressure gauge reaches 30.

(5) Place engine on full throttle after engine is warmed up. (TM 5-2805-258-14).

2-6. Stopping

a. Preparation for Stopping.

(1) Disengage power takeoff operating lever (fig. 2-1).

(2) Place throttle in idle position (TM 5-2805-258-14).

(3) Allow engine to idle (TM 5-2805-258-14).

b. Stopping.

(1) Place "Run-Stop" Switch in "Stop" position (down).

(2) Close the fuel shutoff valve.

(3) Perform the daily preventive maintenance services.

2-7. Roller Operation

a. General. The roller is a towed-type vibrating machine with a smooth drum. It is designed to compact fill materials by imparting vibrations which energize the soil in an area in front, under, and to the rear of the drum. The action is accomplished by an eccentric shaft within the drum, powered by a gasoline engine through a power belt.

CAUTION

Do not vibrate while passing over or standing on solid surfaces, such as concrete pavement. This will transmit great shock throughout the machine and will lead to possible damage of precision parts. Damage may also result to the surface passed over.

NOTE

When the vibrator is engaged for the first time each day, it is advised that the clutch operating lever be engaged and disengaged three or four times in succession before leaving it engaged. This is most important in cold weather, where the grease in the vibrator shaft bearings may have become congealed.

b. Operation.

(1) Connect roller towing eye to towing vehicle.

(2) Place front and rear stands in "up" position and pin.

(3) Start engine (para 2-5).

(4) Engage power takeoff operating lever (para 2-5).

(5) Maintain a steady speed of approximately 1½ miles per hour for best compaction.

2-8. Roller Shutdown

a. Shutdown.

(1) Bring towing vehicle to a stop.

(2) Disengage clutch operating lever. This will stop vibrator.

(3) Set engine throttle to idle.

(4) Stop engine (para 2-6).

(5) Remove pins from stands, lower stands and pin.

(6) Detach roller from towing vehicle.

b. After-Operation Services. Perform the daily preventive maintenance services.

Section IV. OPERATION UNDER UNUSUAL CONDITIONS

2-9. Operation in Cold Weather (below 32°F.)

a. Engine Care (TM 5-2805-258-14).

b. Lubricate as specified in the current lubrication order.

c. Keep fuel tank filled at all times to reduce the risk of water forming in the tank. As any water in the fuel tank will be carried to the fuel strainer, it is important to drain the fuel strainer.

2-10. Operation in Extreme Heat

a. Engine Care (TM 5-2805-258-14).

b. Lubricate as specified in current lubrication order.

2-11. Operation in Dusty or Sandy Areas

a. Lubrication. Clean all lubrication points before applying lubricants. Clean area around the oil filler cap and oil level gauge before inspecting or adding engine oil.

b. Fuel System. Take all necessary precautions to keep dust or sand from entering the fuel tank while filling. Inspect the fuel strainer sediment bowl frequently and service as necessary.

2-12. Operation under Rainy or Humid Conditions

a. General. Coat exposed areas with a suitable lubricating oil or grease and keep the electrical system dry.

b. Lubrication. Lubricate in accordance with current LO 5-3895-341-12.

c. Fuel System. Keep fuel tank full to avoid condensation. Inspect the fuel strainer for water and sediment twice daily. Service the strainer as required.

2-13. Operation in Salt Water Areas

a. General. Paint all exposed non-polished

areas. Coat all other exposed areas with a suitable lubricating oil or grease.

b. Fuel Sustem. Keep fuel tank full to minimize condensation. Service the fuel strainer daily.

c. Electrical System. Keep system components clean and dry. Wipe off moisture and salt deposits. Inspect magneto cap frequently and clean and dry as required.

2-14. Operation at High Altitudes

a. General. The roller is designed to operate without special attention up to 5,000 ft. above sea level.

b. Fuel Tank. Make certain the fuel tank cap is properly vented to allow for expansion of air within the tank. Do not fill the fuel tank completely full. Stop at least a half inch from the top.

c. Air Cleaner. Clean and service daily so that maximum air intake can be accomplished for most efficient operation.

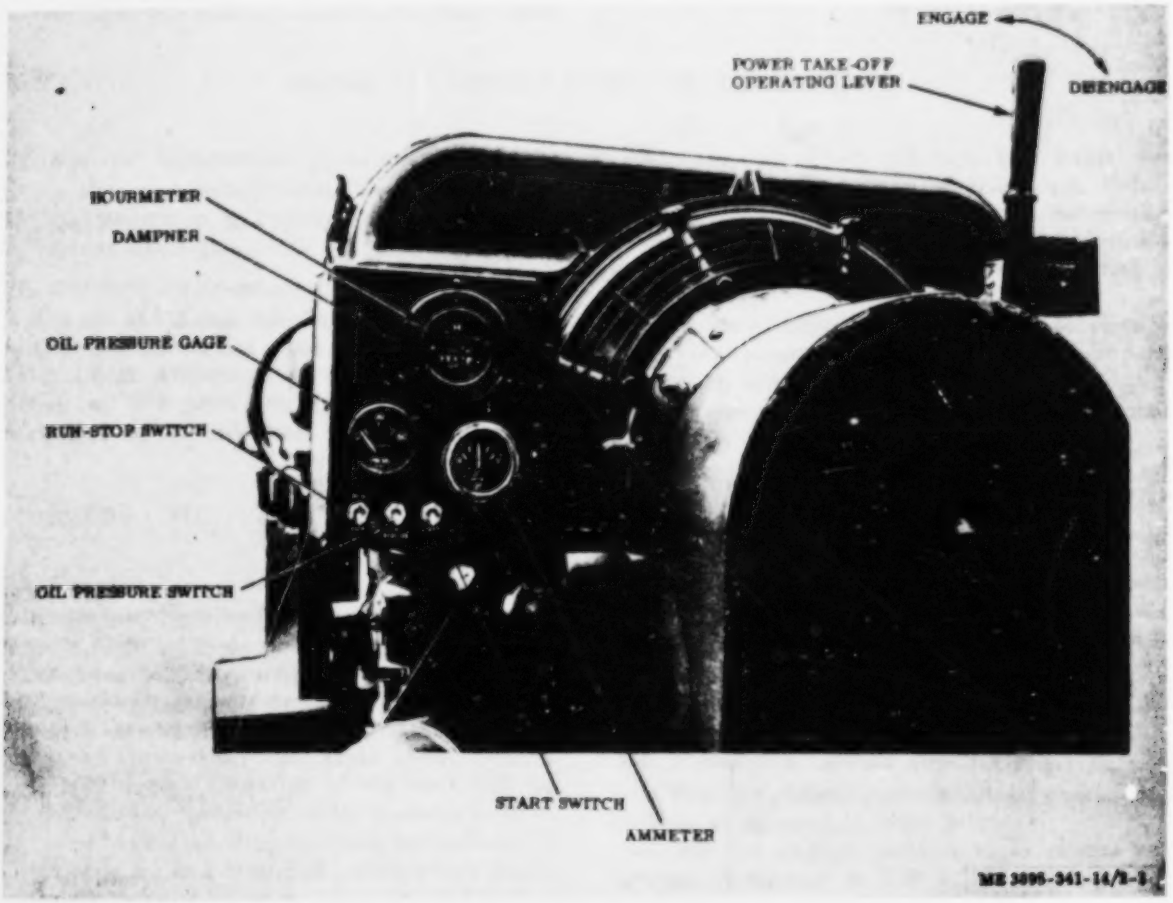


Figure 2-1. Controls and instruments.

CHAPTER 3

OPERATOR / CREW MAINTENANCE INSTRUCTIONS

Section I. BASIC ISSUE ITEMS

Tools, equipment, and repair parts issued with or authorized for the roller are listed in the Basic Issue Items List, Appendix B.

Section II. LUBRICATION INSTRUCTIONS

3-1. General Lubrication Information

This section contains lubrication instructions which are supplemental to, and not specifically covered in the current lubrication order (LO 5-3895-341-12).

3-2. Detailed Lubrication Information

a. General. Keep all lubricants in closed containers and store in a clean, dry place away from external heat. Allow no dust, dirt, or other foreign matter to mix with the lubricants. Keep all lubrication equipment clean and ready for use.

b. Cleaning. Keep all external parts not requiring lubrication clean of lubricants. Before lubricating the equipment, wipe all lubrication points free of dirt and grease. Clean all lubrication points after lubricating to prevent accumulation of foreign matter.

c. Points of Lubrication. Service the lubrication points at proper intervals. Reference current lubrication order (LO 5-3895-341-12).

d. Refer to LO 5-2805-258-12 for engine lubrication instructions.

Section III. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

3-3. General

To insure that the roller is ready for operation at all times, it must be inspected systematically so that defects may be discovered and corrected before they result in serious damage or failure. The necessary preventive checks and services to be performed are listed in table 3-1. Defects discovered during operation of the unit will be noted for future correction, to be made as soon as operation has ceased. Stop operation immediately if a deficiency is noted during operation which would damage the equipment if operation were continued. Defects or unsatisfactory operating characteristics beyond the scope of the operator to correct must be reported on DA Form 2404 (Equipment Inspection and Maintenance Work Sheet) at the earliest possible opportunity.

3-4. Preventive Checks and Services

a. For the roller, perform these checks and services as directed in table 3-1.

b. For the engine, perform these checks and services as directed in TM 5-2805-258-14.

Table 3-1. Preventive Maintenance Checks and Services

	Interval						B — Before Operation D — During Operation	A — After Operation W — Weekly	M — Monthly Q — Quarterly
	Operator				Org.				
Item number	Daily			W	M	Q	Item to be Inspected	Procedure	Reference
	B	D	A						
1.	X	X	X				Engine	Check oil level and engine accessories Ref. TM 5-2805-258-14	Paragraph 3-5
2.				X			Battery cables	Check for loose or broken cables and dirty connections	Paragraph 3-6
3.				X			Battery box	Check for loose or broken flex mountings	Paragraph 3-6
4.	X						Fuel strainer	Check sediment bowl for dirty fuel or water	Paragraph 3-7
5.				X			Muffler	Check for clogged holes	Paragraph 3-8

Section IV. MAINTENANCE OF ROLLER

3-5. Engine Care

Refer to TM 5-2805-258-14.

3-6. Batteries

a. Inspect battery cables for loose connections.
b. Inspect for insecure mounting of batteries.

3-7. Fuel Strainer

a. Inspect for leak.
b. Inspect for cracked sediment bowl.
c. Inspect for excessive dirt or water in sediment bowl.

3-8. Muffler

a. Inspect for clogged holes.
b. Inspect for holes caused by hot exhaust.

CHAPTER 4

ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Section I. REPAIR PARTS, SPECIAL TOOLS AND EQUIPMENT

4-1. Special Tools and Equipment

No special tools or equipment required.

4-2. Maintenance Repair Parts

Repair parts for organizational maintenance are listed in appendix D of this manual. Reference TM 5-2805-258-24P for engine repair parts listing.

Section II. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

4-3. Preventive Checks and Services

a. For the roller, perform the checks and services as directed in table 4-1.

b. For the engine, perform these checks and services as directed in TM 5-2805-258-14.

Table 4-1. Preventive Maintenance Checks and Services

B — Before Operation A — After Operation M — Monthly
D — During Operation W — Weekly Q — Quarterly

Item number	Interval: Operator: Daily: B	Interval: Operator: Daily: D	Interval: Operator: Daily: A	Interval: Operator: W	Interval: Org.: M	Interval: Org.: Q	Item to be inspected	Procedure	Reference
1.					X	X	Engine.	TM 5-2805-258-14.	
2.					X		Batteries.	Perform specific gravity test.	Paragraph 5-6*c.1*
3.					X		Gages and Switches.	Check for proper functioning.	
4.					X		Clutch assembly.	Check for proper operation and adjustment.	Paragraph 4-10
5.					X		Drive belt.	Check for worn or damaged belt.	Paragraph 4-12
6.					X		Belt pulleys.	Check for worn grooves.	
7.					X		Scraper blade.	Check for excessive wear.	Paragraph 4-14

Section III. TROUBLESHOOTING

4-4. General

This section provides information useful in diagnosing and correcting unsatisfactory operation or failure of the roller and its components. Malfunctions which may occur are listed in Table 4-2. Each malfunction stated is followed by a list of probable causes. The corrective action recommended is described opposite the probable cause.

4-5. Engine Malfunction

If engine malfunctions refer to TM 5-2805-258-14.

Section IV. RADIO INTERFERENCE SUPPRESSION

Refer to TM 5-2805-258-12 for instructions on radio interference suppression on the gasoline engine.

Table 4-2. Troubleshootin

Malfunction	Probable Cause	Corrective Action
1. Engine fails to start.	*a.* Lack of fuel.	*a.* Fill fuel tank.
	b. Low battery charge.	*b.* Recharge or replace battery.
	c. Broken battery cable.	*c.* Replace cable.
	d. Dirty of loose battery cable connections.	*d.* Clean and tighten battery cable connections.
	e. Dirty fuel strainer	*e.* Clean or replace strainer.
2. Clutch runs hot.	Shaft bearings are dry.	Lube per latest lubrication order.
3. Vibrator shaft not turning at proper RPM.	*a.* Belt loose.	*a.* Tighten belt.
	b. Engine not running at proper speed.	*b.* Ref. TM 5-2805-258-14.
4. Vibrator shaft does not turn.	*a.* Shaft bearings seized to shaft.	*a.* Report to general support.
	b. Clutch slipping.	*b.* Report to general support.

Section V. ELECTRICAL SYSTEM

4-6. Batteries (fig. 4-1)

a. Removal.

(1) Loosen terminal connector bolts (1) and remove jumper cable (2).

(2) Loosen terminal connector bolt (3), remove nut (4), washer (5), bolt (6), and remove ground cable (7).

(3) Loosen terminal connector bolt (8), nut (9), washer (10), bolt (11), clamp (12), nut (13), and remove battery cable (14) by feeding it through hole (15) after dislodging grommet (16).

(4) Remove nut (17), washer (18), holddown bolt (19), and holddown (20). Lift out batteries (21).

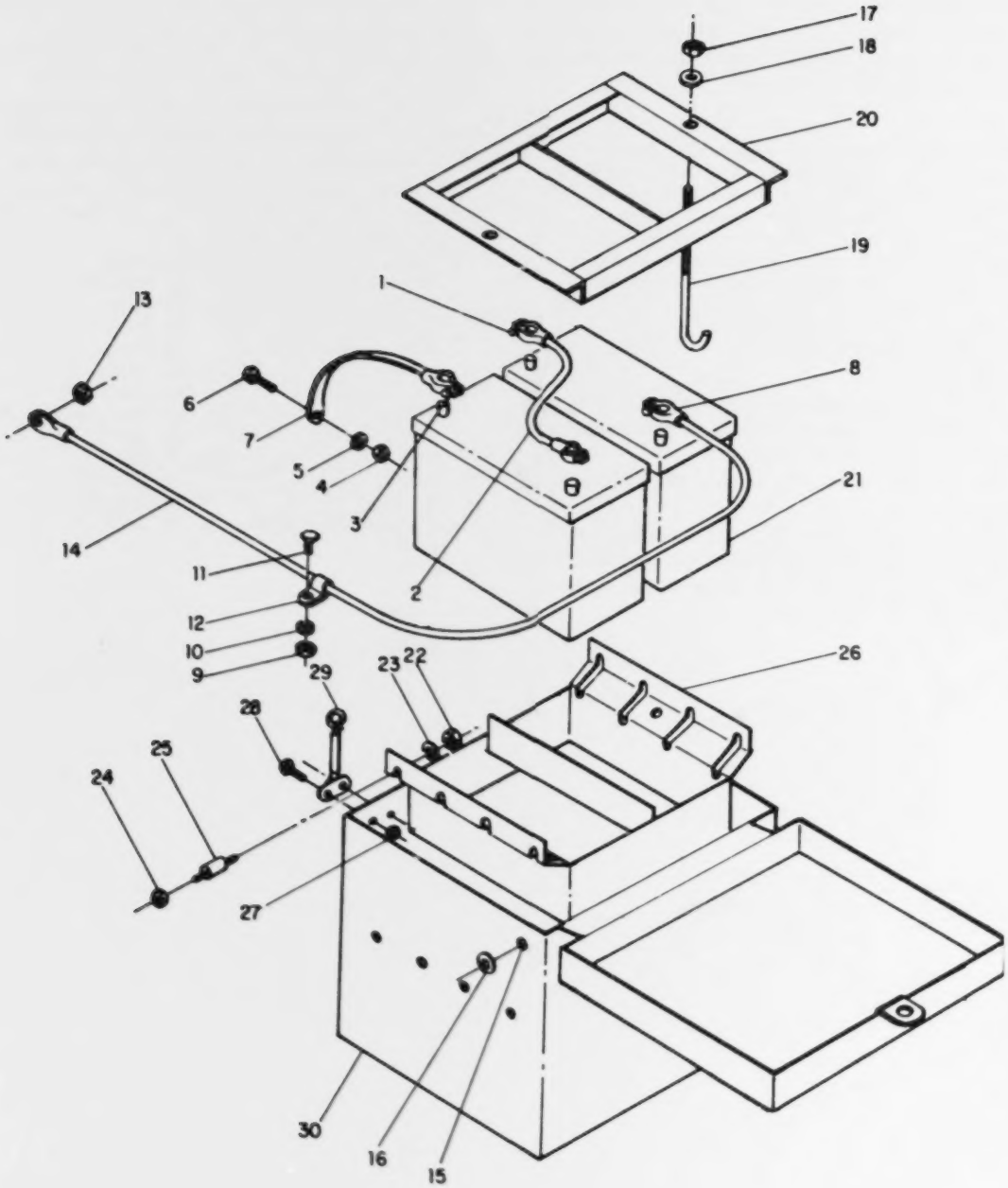
(5) Remove nuts (22), washers (23), nuts (24), flex bolt (25), and lift out battery tray (26).

(6) Remove nuts (27), screws (28) and remove hasps (29) from battery box (30).

b. Installation. Installation is in the reverse of removal.

KEY TO FIGURE 4-1:

1 Bolt	16 Grommet
2 Cable, Jumper	17 Nut
3 Bolt	18 Washer
4 Nut	19 Bolt
5 Washer	20 Hold-Down
6 Bolt	21 Battery
7 Cable, Ground	22 Nut
8 Bolt	23 Washer
9 Nut	24 Nut
10 Washer	25 Flex Bolt
11 Bolt	26 Tray, Battery
12 Clamp	27 Nut
13 Nut	28 Screw
14 Cable, Battery	29 Hasp
15 Hole	30 Box, Battery



ME3895-341-14/4-1

Figure 4-1. Battery components removal and installation.

c. Specific Gravity Test. Specific gravity testing of the battery electrolyte determines the state of charge in each battery cell. Use a hydrometer and thermometer, correcting the hydrometer reading for temperature (Note below). A corrected specific gravity reading of 1.285 in each cell indicates a fully charged battery. A specific gravity reading of 1.225 or less in each cell indicates that the battery must be recharged or replaced.

NOTE

A temperature-corrected specific gravity measurement is obtained by adding 0.004 to the actual hydrometer reading for each 10 degrees F (5.5 degrees C) the electrolyte is above 80 degrees F (26.7 degrees C), or subtracting 0.004 from the actual hydrometer reading for each 10 degrees F (5.5 degrees C) the electrolyte is below 80 degrees F (26.7 degrees C).

4-7. Control Panel (fig. 4-2)

a. Removal.

(1) Remove cover plate screws (1). Lift off cover plate (2). Instruments and switches are attached to cover back side.

(2) Remove wires (3), screws (4) and remove hourmeter (5).

(3) Remove screws (6) and dampener (7).

(4) Remove wires (8), nuts (9), washers (10), wire (11), clamp (12) and remove oil pressure gauge (13).

(5) Remove nuts (14), washers (15), wires (16), nuts (17), clamp (18) and remove ammeter (19).

(6) Remove all switch wires (20), nuts (21) and remove switches (22).

(7) Remove screws (23), washers (24), and wire assembly plug (25), from engine.

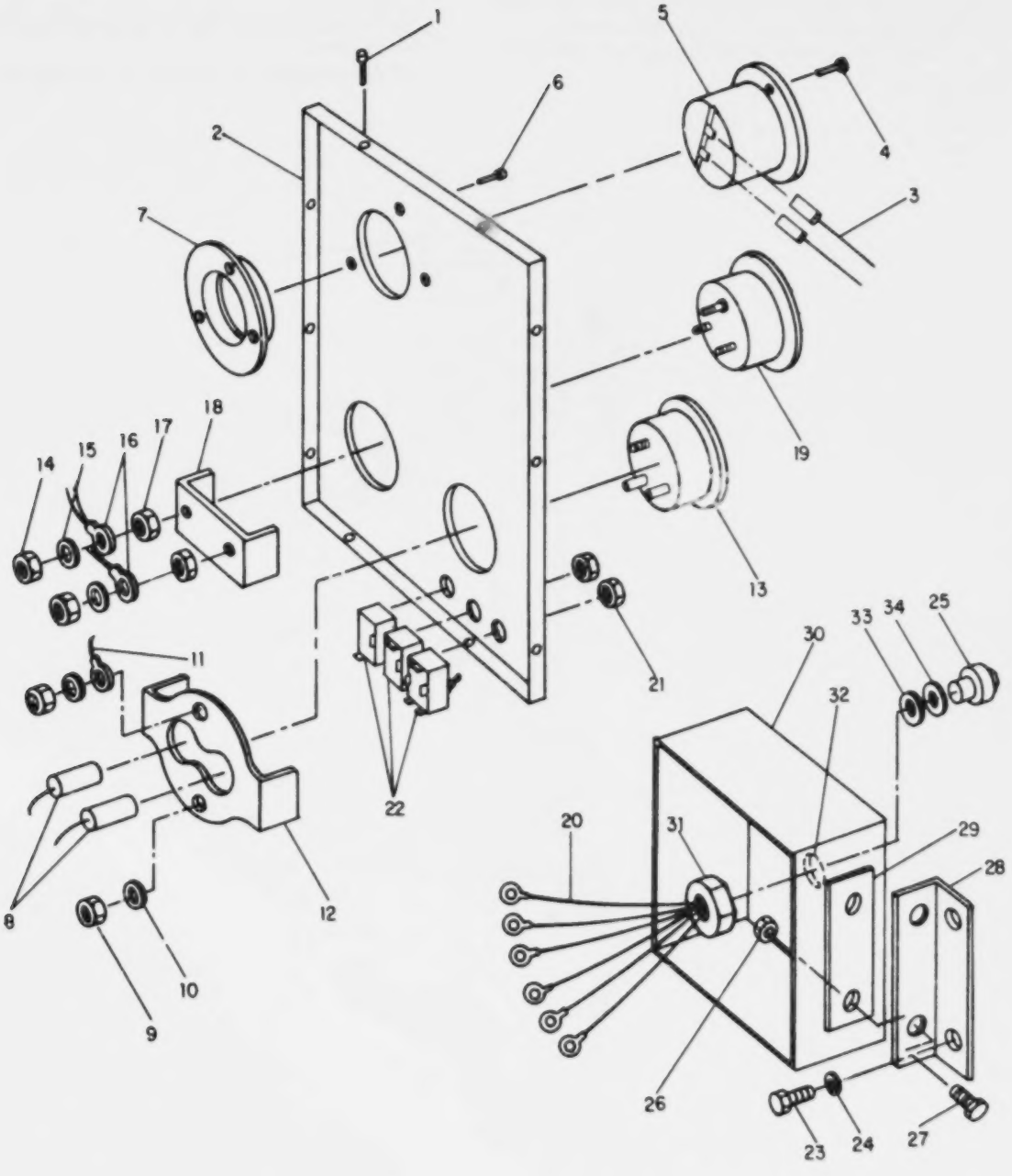
(8) Remove nut (26), screw (27), bracket (28), and dampener (29), from box (30).

(9) Remove nut (31), feed wires (20) through hole (32), and remove rubber washer (33), and steel washer (34), from wire assembly plug (25).

b. Installation. Installation is in the reverse of removal. (Wiring Diagram fig. 1-3 for re-wiring).

KEY TO FIGURE 4-2

1 Screw	18 Clamp
2 Cover Plate	19 Ammeter
3 Wire	20 Wire
4 Screw	21 Nut
5 Hourmeter	22 Switch
6 Screw	23 Screw
7 Dampener	24 Washer
8 Wire	25 Wire Assembly Plug
9 Nut	26 Nut
10 Washer	27 Bolt
11 Wire	28 Bracket
12 Clamp	29 Dampener
13 Gauge, Oil Pressure	30 Box
14 Nut	31 Nut
15 Washer	32 Hole
16 Wire	33 Rubber Washer
17 Nut	34 Steel Washer



ME3895-341-14/4-2

Figure 4-2. Control panel.

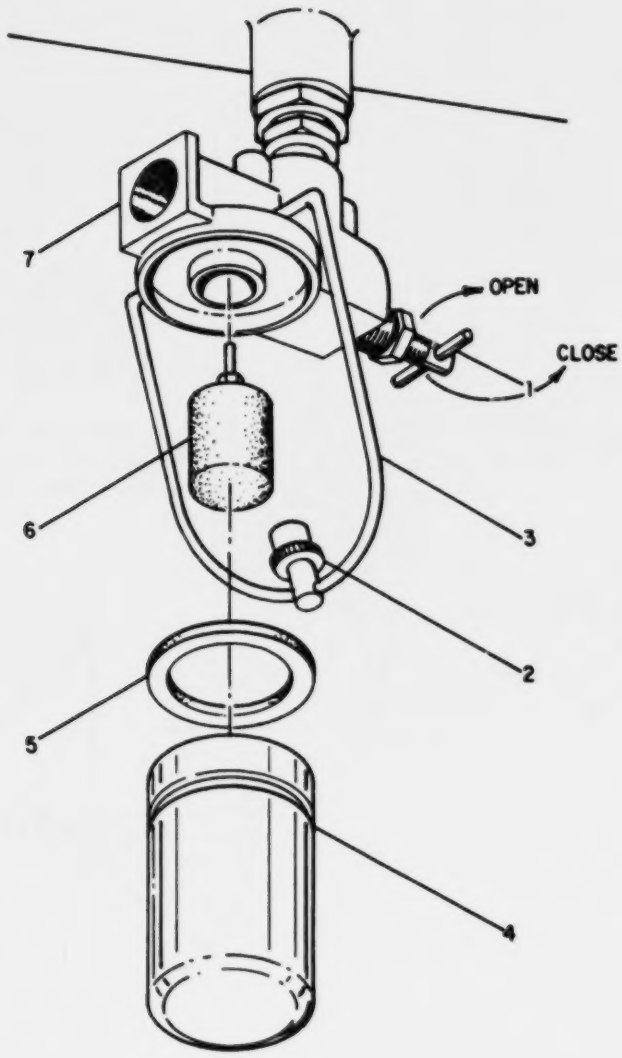
4-8. Fuel Strainer Service

a. Turn fuel strainer shutoff valve, (1. fig. 4-3), to closed position.

b. Loosen thumbscrew (2). Swing bail (3) to one side and remove bowl (4), gasket (5) and strainer (6) from head (7).

c. Inspect all parts for obvious damage and clean with solvent.

d. Reassembly in reverse of disassembly.



ME3895-341-14/4-3

1 Valve
2 Thumbscrew
3 Bail
4 Bowl
5 Gasket
6 Strainer
7 Head

Figure 4-3. Fuel strainer.

4-9. Fuel Tank, Strainer and Gauge

a. Removal.

(1) Disconnect hose, (1. fig. 4-4).

(2) Remove nut (2), washers (3), bolt (4), clamp (5), and remove hose(1).

(3) Remove adapter (6), and elbow (7) from engine.

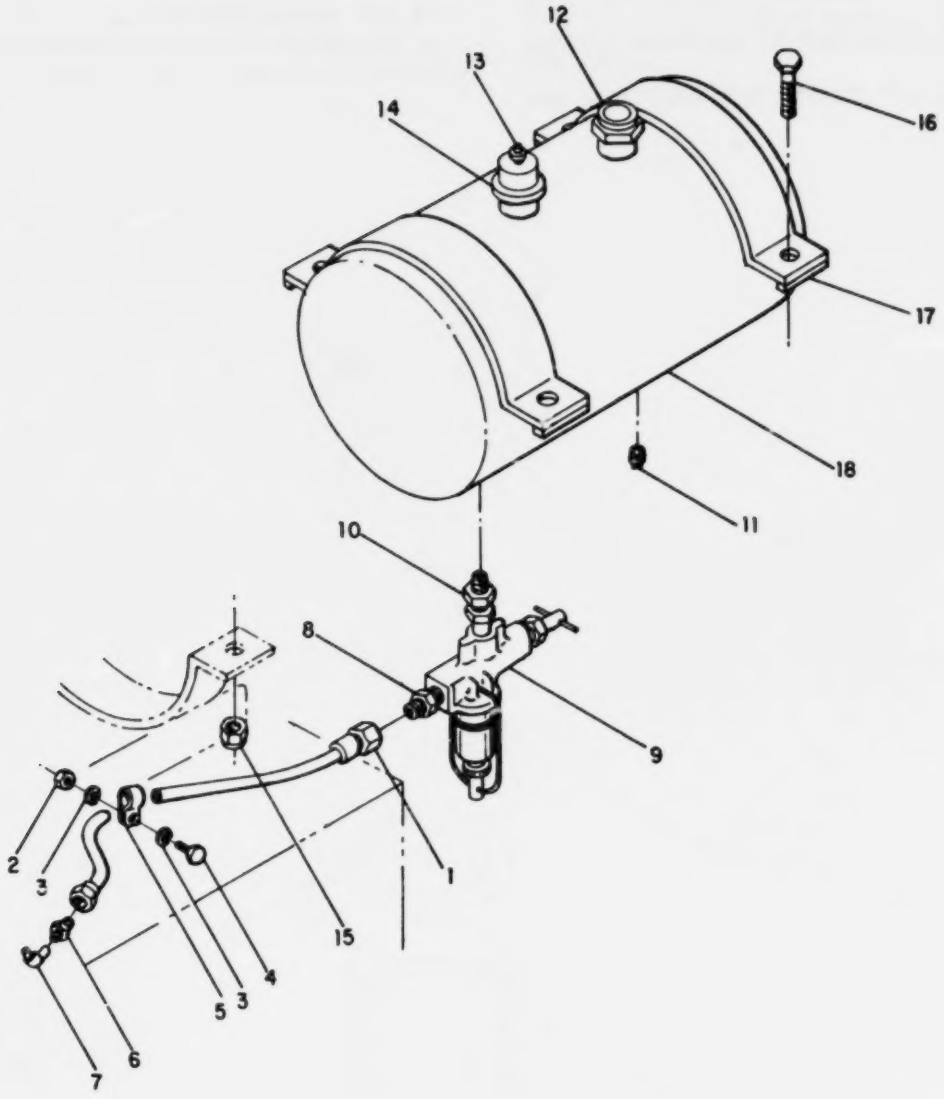
(4) Remove adapter (8), filter (9), and adapter (10).

(5) Remove drain plug (11).

(6) Remove fuel gauge (12), breather (13), and cap (14).

(7) Remove nuts (15), bolts (16), brackets (17), and remove tank (18).

b. Installation. Installation is in the reverse of removal.



ME3895-341-14/4-4

1 Hose	10 Adapter
2 Nut	11 Drain Plug
3 Washer	12 Fuel Gauge
4 Bolt	13 Breather
5 Clamp	14 Cap
6 Adapter	15 Nut
7 Elbow	16 Bolt
8 Adapter	17 Bracket
9 Strainer	18 Tank

Figure 4-4. Fuel tank, strainer and gauge.

Section VII. POWER TAKEOFF CLUTCH ASSEMBLY

4-10. Clutch Assembly Adjustment

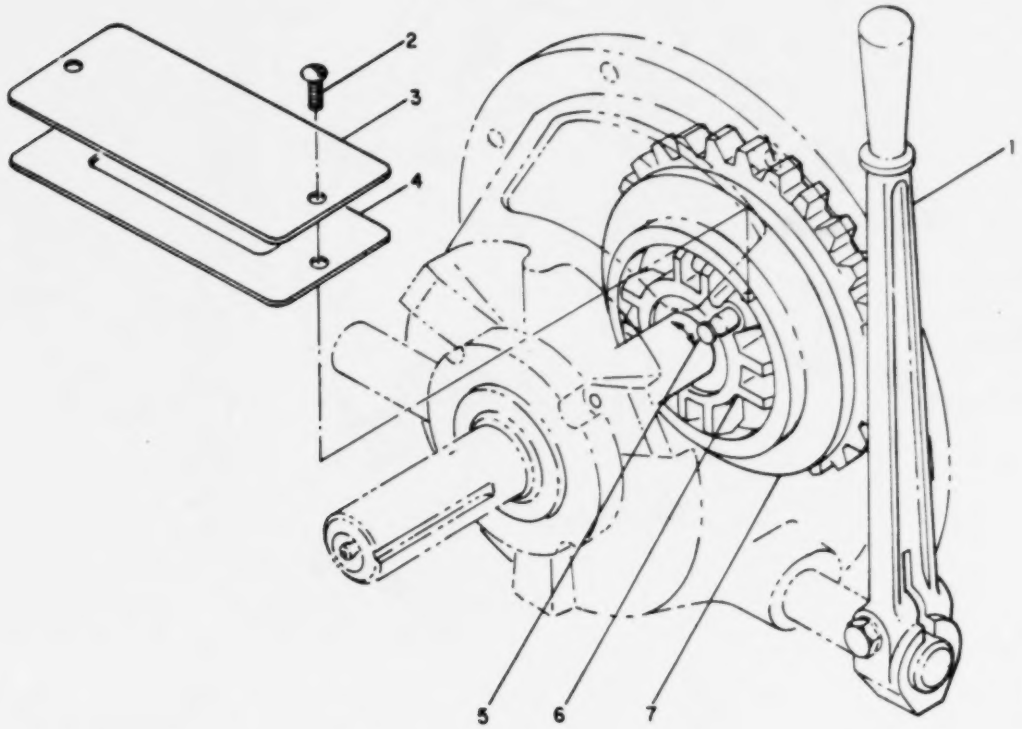
a. Place lever, (1, fig. 4-5) in disengaged position (para 2-3).

b. Remove screws (2), plate (3) and gasket (4).

c. Turn clutch until spring-loaded pin (5) is in full view. Pull out pin and turn adjusting yoke (6) in clockwise direction to tighten. Allow pin to re-engage itself in one of the holes in the floating plate (7).

d. Engage lever (1) to check clutch pressure. When a slight pressure is felt at engagement with a snap into place, the clutch is adjusted properly. Disengage lever.

e. Replace gasket (4) and plate (3) with screws (2).



ME 3895-341-14/4-5

1 Lever, Operating
2 Screw, Machine
3 Plate, Model
4 Gasket
5 Pin
6 Yoke, Adjusting
7 Plate, Floating

Figure 4-5. Clutch Adjustment.

4-11. Operating Lever and Lube Fittings (fig. 4-6)

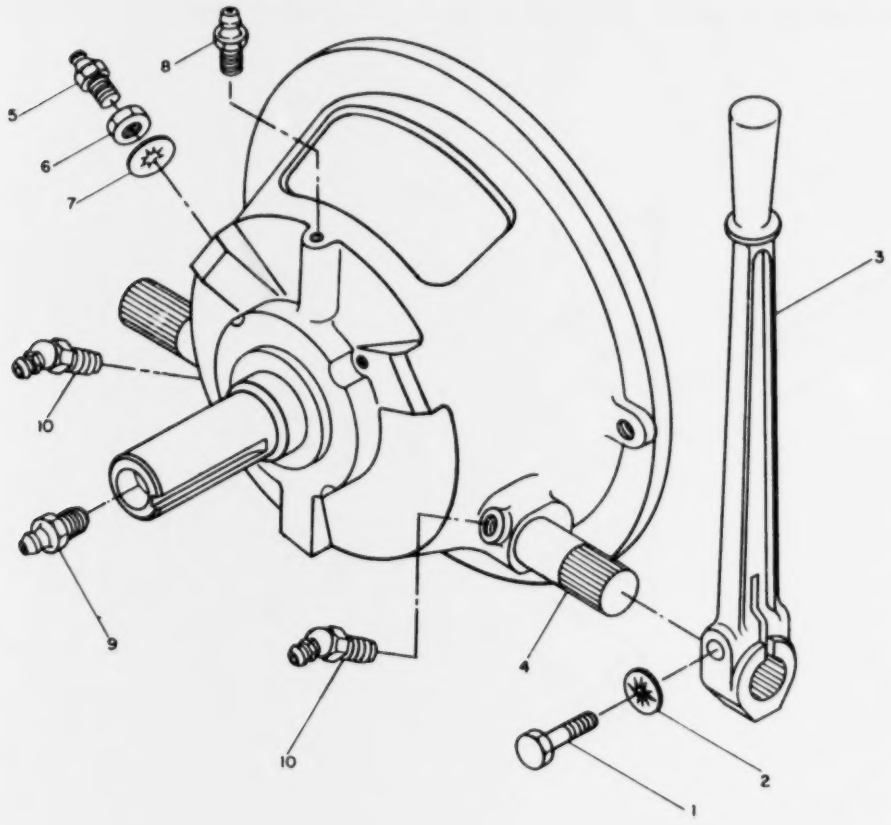
a. Removal.

(1) Remove bolt (1), washer (2), and remove lever (3) from shaft (4).

(2) Remove lube fitting (5), nut (6), and washer (7).

(3) Remove remaining lube fittings (8), (9), and (10).

b. Installation. Installation is in the reverse of removal.



ME3895-341-14/4-6

1 Bolt
2 Washer
3 Lever
4 Shaft
5 Lube Fitting
6 Nut
7 Washer
8 Lube Fitting
9 Lube Fitting
10 Lube Fitting

Figure 4-6. Operating lever and lube fittings removal.

4-12. Drive Belt (fig. 4-7)

a. Adjustment.

(1) Loosen engine base upper nuts (1).

(2) Tighten engine lower nuts (2) equally around so that engine base (3) remains level.

(3) With fingers, squeeze belt (4) together, midway between pulleys (5) and (6). When the belt sides are approximately three inches apart, it is adjusted properly.

b. Removal.

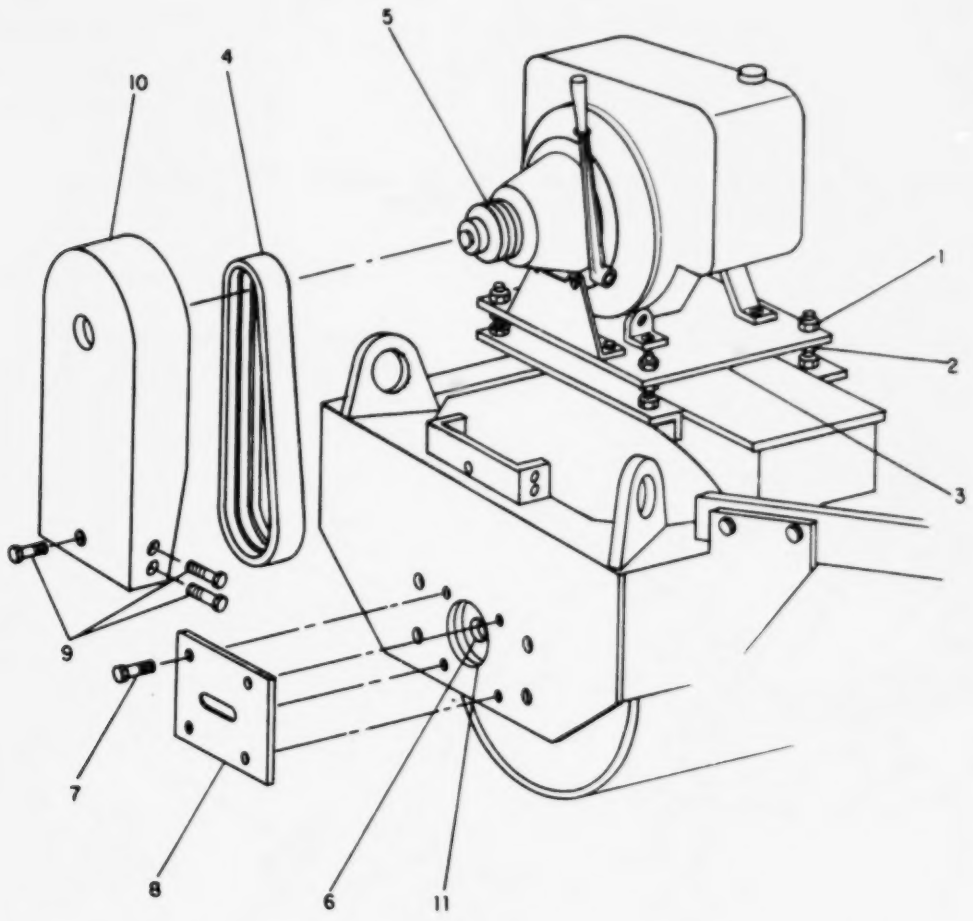
(1) Remove bolts (7) that secure cover plate (8) and remove cover plate.

(2) Remove bolts (9) that secure belt guard (10) and remove guard.

(3) Loosen engine base lower nuts (2) approximately ½ inch. This will allow engine base (3) to lower, and drive belt (4) to loosen. Disengage

belt from pulley (5), free belt from pulley (6), using hole (11) for access and clearance. Lift belt (4) free.

c. Installation. Installation is in the reverse of removal.



ME3895-341-14/4-7

1 Nut	7 Bolt
2 Nut	8 Plate
3 Base	9 Bolt
4 Belt	10 Guard
5 Pulley	11 Hole
6 Pulley	

Figure 4-7. Drive belt adjustment and removal.

4-13. Roll Lube Fittings (fig. 4-8)

a. Removal.

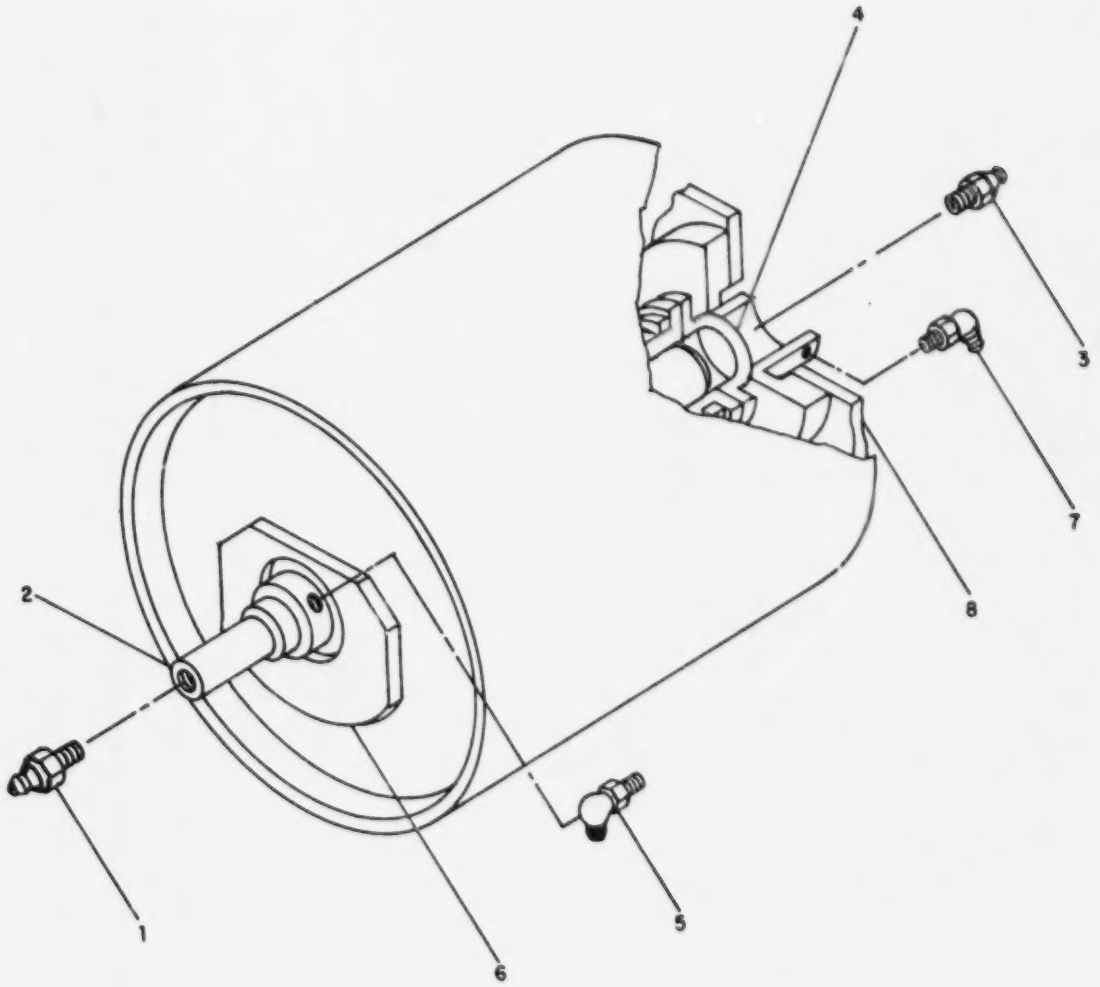
(1) Remove lube fitting (1) from end of shaft (2).

(2) Remove lube fitting (3) from end of bearing housing (4).

(3) Remove lube fitting (5) from flex mount (6).

(4) Remove lube fitting (7) from flex mount (8).

b. Installation. Installation is in the reverse of removal.



ME 3895-341-14/4-8

Figure 4-8. Roll lube fittings removal.

KEY TO FIGURE 4-8:

1 Lube Fitting
2 Shaft
3 Lube Fitting
4 Bearing Housing
5 Lube Fitting
6 Flex Mount
7 Lube Fitting
8 Flex Mount

Section VIII. ROLL, BLADE, MUFFLER, TEMPERATURE SWITCH TOWING EYE AND TONGUE

4-14. Scraper Blade (fig. 4-9)

a. Removal.

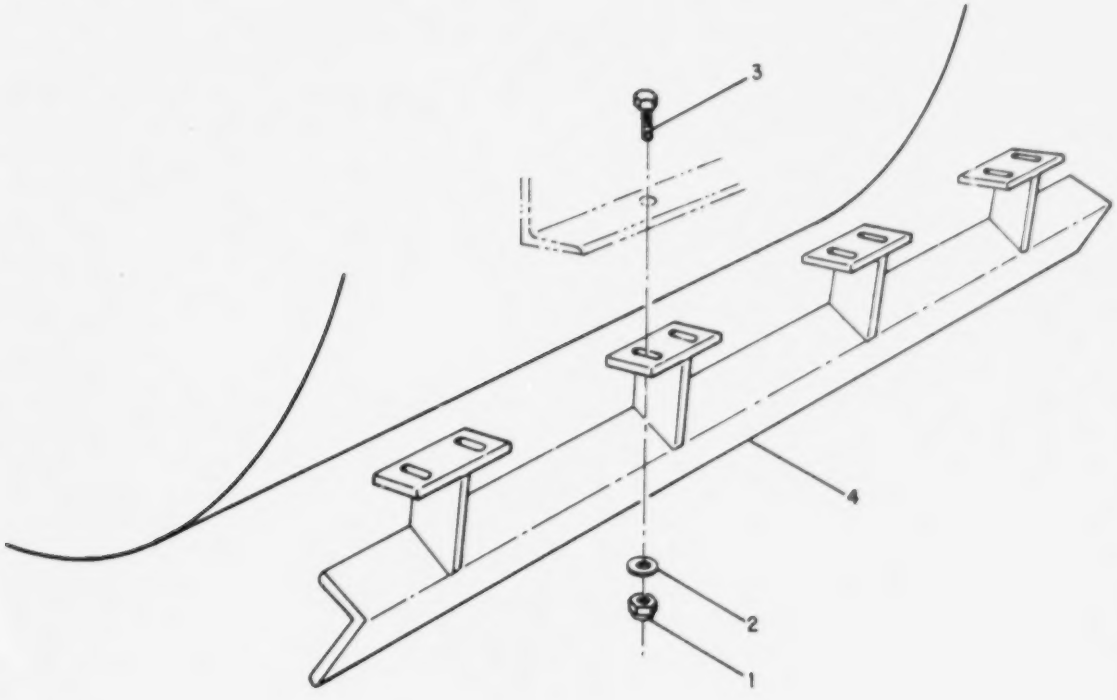
(1) Inspect for secure mounting.

(2) Inspect for excessive wear.

(3) Removal

Remove nuts (1), washers (2), bolts (3) and remove scraper blade (4).

b. Installation. Installation is in the reverse of removal.



ME3895-341-14/4-9

1 Nut
2 Washer
3 Bolt
4 Scraper

Figure 4-9. Scraper blade removal.

4-15. Towing Components (fig. 4-10)

a. Removal.

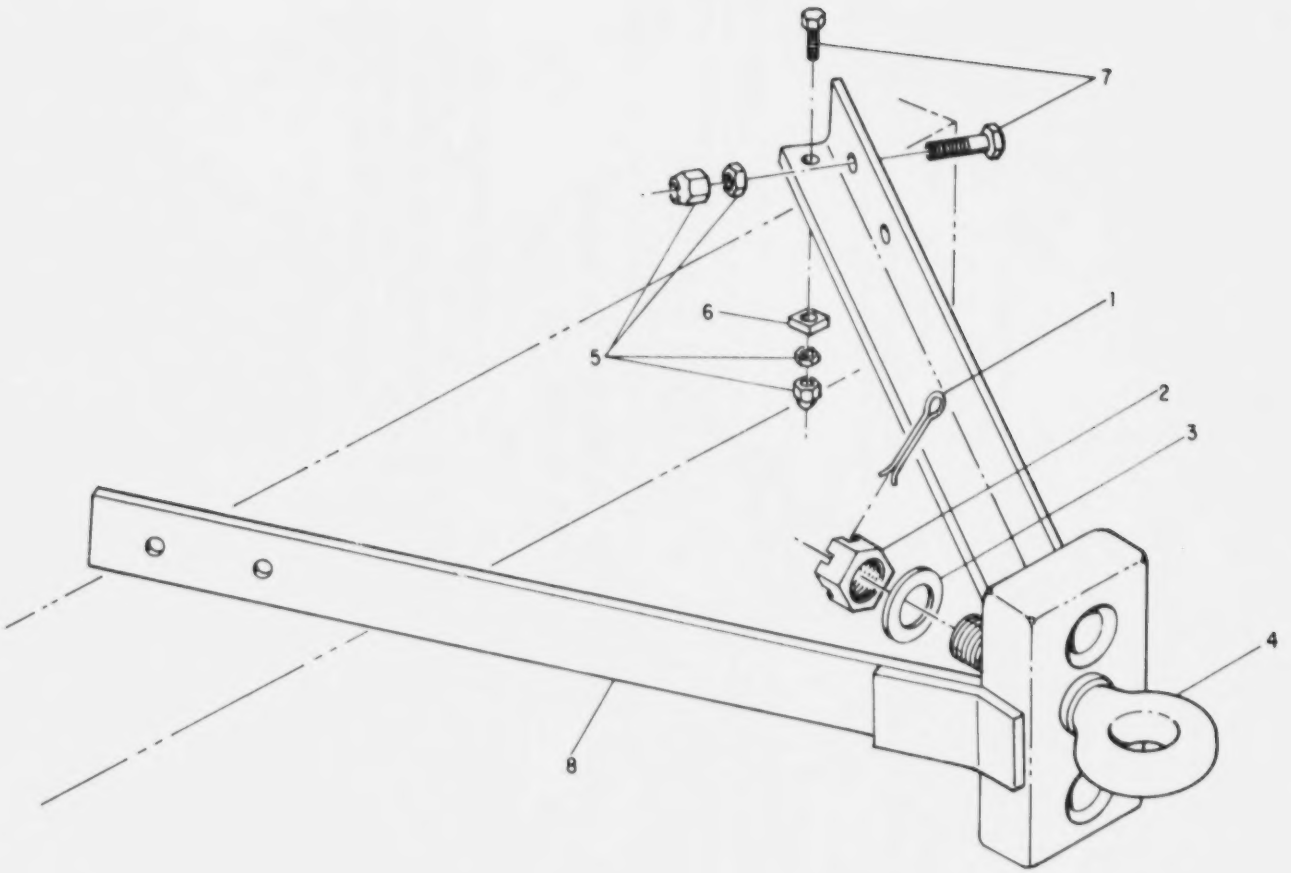
(1) Remove cotter pin (1), nut (2), washers (3) and remove towing eye (4).

(2) Remove nuts (5), washers (6), bolts (7) and remove towing tongue (8).

b. Installation. Installation is in the reverse of removal.

KEY TO FIGURE 4-10:

1 Cotter Pin
2 Nut
3 Washer
4 Eye
5 Nut
6 Washer
7 Bolt
8 Tongue



ME 3895-341-14/4-10

Figure 4-10. Towing Tongue and eye removal.

4-16. Muffler

a. Removal. Turn in counterclockwise direction.

b. Installation. Installation is in the reverse of removal.

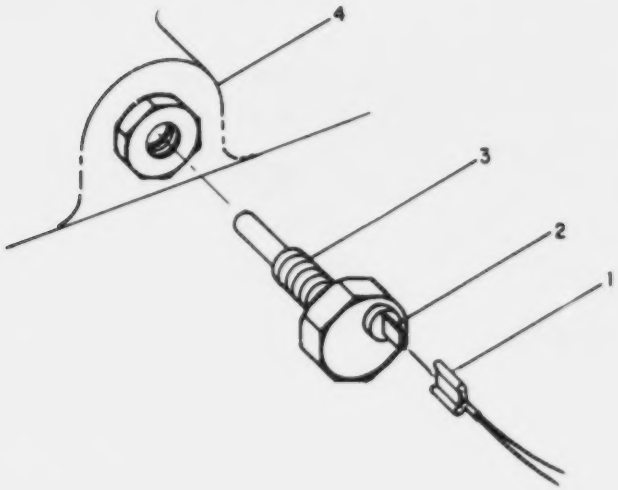
4-17. Temperature Switch (fig. 4-11)

a. Removal.

(1) Remove wire (1) from tab (2).

(2) Remove temperature switch (3), from engine (4).

b. Installation. Installation is in the reverse of removal.



ME 3895-341-14/4-11

1 Wire
2 Tab
3 Switch
4 Engine

Figure 4-11. Temperature switch.

CHAPTER 5

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE INSTRUCTIONS

Section I. REPAIR PARTS, SPECIAL TOOLS AND EQUIPMENT

5-1. Special Tools and Equipment

No special tools or equipment required.

5-2. Maintenance Repair Parts

Repair parts for direct and general support are listed in appendix D of this manual. Reference TM 5-2805-258-24P for engine repair parts listing.

Section II. TROUBLESHOOTING

5-3. General

Malfunctions which may occur are listed in Table 5-1. Each malfunction stated is followed by a list of probable causes. The corrective action recommended is described opposite the probable cause

Table 5-1. Troubleshooting

Malfunction	Probable Cause	Corrective Action
1. Vibrator shaft does not turn.	*a.* Shaft bearings seized to shaft. *b.* Clutch slipping.	*a.* Replace shaft bearings. *b.* Adjust or replace clutch disc.
2. Engine	TM 5-2805-258-14	TM 5-2805-258-14

Section III. REMOVAL AND INSTALLATION OF MAJOR COMPONENTS

5-4. Power Takeoff

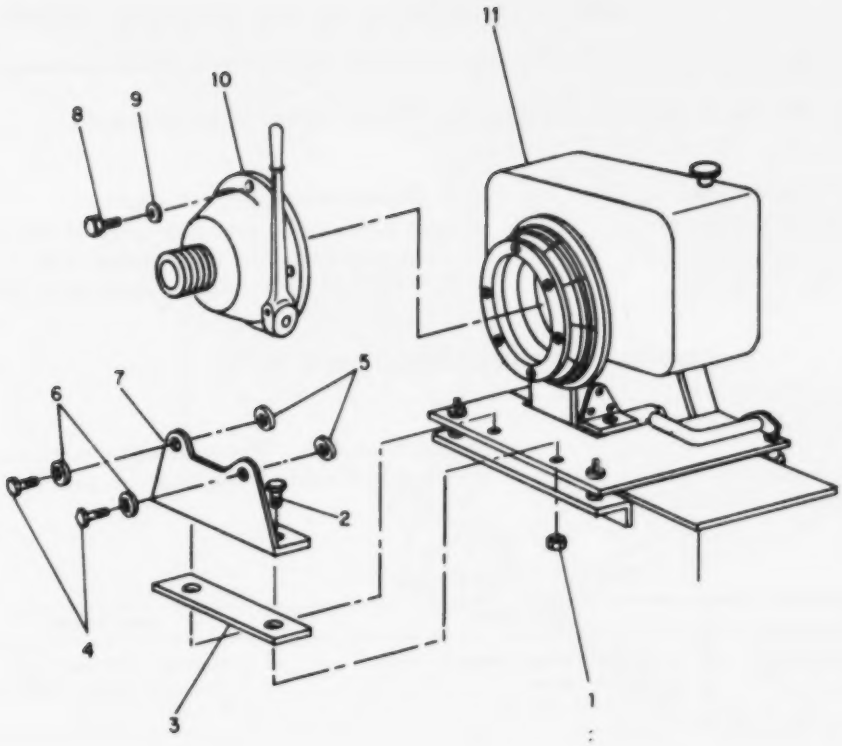
a. Removal. (fig. 5-1)

(1) Remove belt guard and belt (para 4-12).

(2) Remove nuts (1), bolts (2), shim (3), bolts (4), washers (5) and (6) remove support (7).

(3) Remove bolts (7), washers (8), and remove power takeoff (9) from engine (10).

b. Installation. Installation is in the reverse of removal.



ME 3895-341-14/5-1

1 Nut
2 Bolt
3 Shim
4 Bolt
5 Washer
6 Washer
7 Support
8 Bolt
9 Washer
10 Power takeoff
11 Engine

Figure 5-1. Power take-off removal.

5-5. Engine Assembly

a. Removal. (fig. 5-2).

(1) Remove belt guard and belt (para 4-12).

(2) Remove power takeoff (para 5-4).

(3) Turn fuel strainer shutoff valve to closed position (para 4-9).

(4) Disengage latches (1) and remove engine top shroud (2).

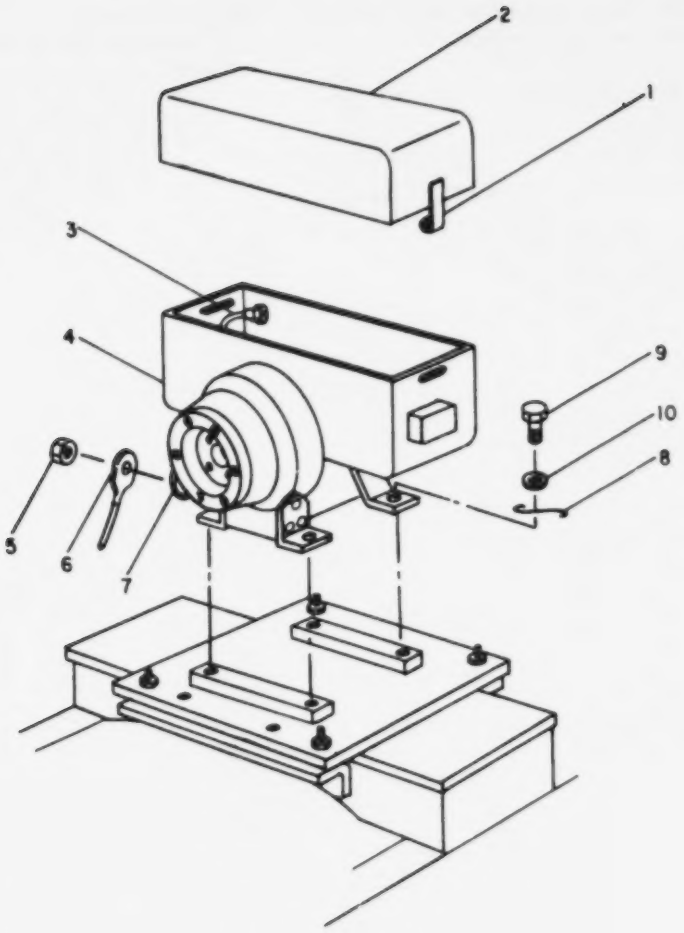
(5) Disconnect hose (3) at engine (4), and remove hose from engine.

(6) Remove nut (5) and battery cable (6) from starter (7).

(7) Remove wire (8), bolts (9), and washers (10).

(8) Attach suitable lifting device to engine. Reference TM 5-2805-258-14, and lift engine free.

b. Installation. Installation is in the reverse of removal.



ME-3895-341-14/5-2

1 Latch
2 Shroud
3 Hose
4 Engine
5 Nut
6 Cable
7 Starter
8 Wire
9 Bolt
10 Washer

Figure 5-2. Engine assembly removal.

5-6. Roll and Shaft Assembly

a. Removal. (fig. 5-3).

(1) Remove belt guard and belt (para 4-12).

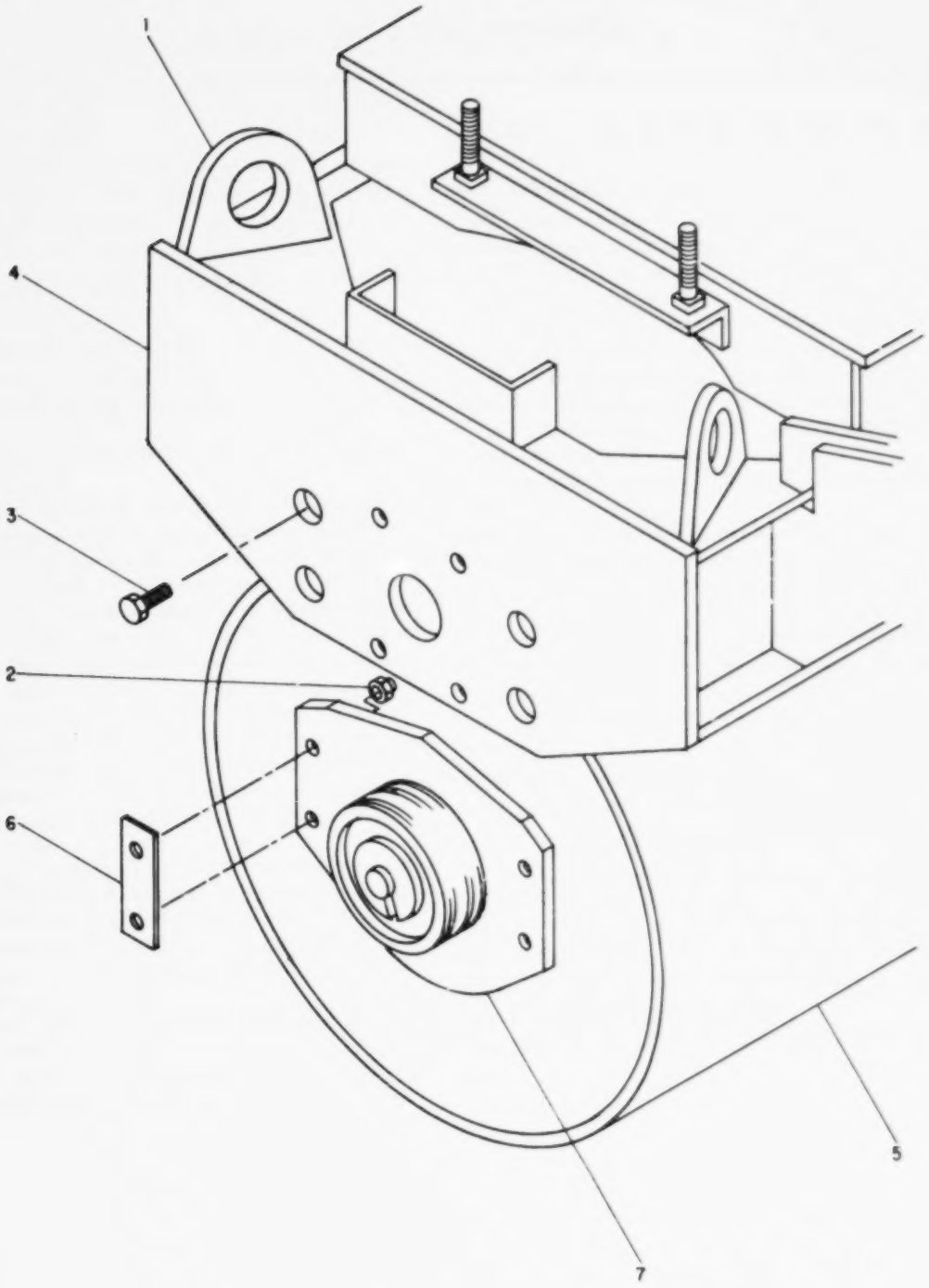
(2) Place sling lifting hooks into eyes (1) and lift sling until hooks are taut in eyes. Do not lift roller.

(3) Remove nuts (2), bolts (3) and lift roller frame (4) free of roll (5). Shims (6) may have been used between frame and flex mounts (7) to give an initial compression of approximately 1 / 16 inch to the flex mounts.

b. Installation. Installation is in the reverse of removal.

KEY TO FIGURE 5-3:

1 Eye
2 Nut
3 Bolt
4 Frame
5 Roll
6 Shim
7 Flex Mount



ME3895-341-14/5-3

Figure 5-3. Roll and shaft assembly removal.

CHAPTER 6

REPAIR OF ROLL ASSEMBLY

6-1. General

The roll assembly consists of a roll, shaft, bearings, bearing housings, stub axles, pulley and flex mountings with bushings.

6-2. Removal

Remove nuts (1), bolts (2), bolts (3), and shims (4). (para 5-6).

6-3. Disassembly (fig. D-6)

a. Remove bushing lock screw (5).

b. Remove bushing (6), pulley (7) and remove key (8).

c. Remove flex mounts (9) and thrust washers (10).

d. Remove nuts (11), stub axles (12) and (13). A slight tapping with a brass mallet around the periphery of the stub axles will release them.

e. Remove shaft (14). Place ¾ inch diameter steel rod, 18 to 24 inches long, into hole provided in short end of shaft; and 1½ or 2 inch standard pipe, approximately 5 feet long, over long end of shaft. With one man holding the rod, a second man pushes on the pipe. Shaft is fed through the roll (15) in this manner. Pipe will not allow shaft to fall into roll. The bearing housing (16) at the short end of the shaft will come away with shaft. Remove bearing housing (16) and shims (17) from roll (15) and shaft (14).

f. Remove bearings (18) from bearing housings (16). Bearings are a light press fit into housings and must be removed with an arbor press. Use a 3½ inch diameter piece of tubing or solid steel, 4 to 6 inches long, and place against bearing inner race.

g. Remove studs (19).

h. Remove grease fittings (20) from end of shaft (14) and stub axle (13).

i. Remove screw (21), washer (22) and remove bushing (23) from flex mount (9).

j. Remove grease fitting (24) from flex mount (9).

6-4. Cleaning—Inspection—Repair

a. Clean all parts with an approved cleaning solvent and dry thoroughly.

b. Inspect grease hole in end of shaft that it is open. Clean out old grease with wire.

c. Inspect shaft bearing surfaces for build-up of carbon. Polish with very fine emery cloth.

d. Inspect bearing housings for out-of-roundness. Replace if .005 inch or more.

e. Inspect stub axles for scarred bushing surfaces. Replace if scarred.

f. Inspect flex mounts for cracks in, or sagging of rubber.
Replace if cracks are ¼ inch deep or more and if rubber is sagging ½ inch or more.

g. Bushing should be replaced anytime the roller is down for repairs.

h. Inspect bearings for scarred rollers or roller surfaces and for carbon build-up. Replace if bearing rollers are scarred or show a build-up of carbon. Bearing inner race must turn freely and smoothly.

6-5. Reassembly (fig. D-6)

a. Hand-pack the bearings (18) and fill the cavities of the stub axles (12) and (13) with grease. See latest lubrication order.

b. Reassembly is the reverse of disassembly.

c. When assembled, shaft (14) must have end play of 1 / 16 to ⅛ inch. This is accomplished by the use of shims (17) as required between the bearing housings (16) and roll (15).

6-6. Installation (para. 5-6)

Installation is in the reverse of removal.

CHAPTER 7

REPAIR OF POWER TAKEOFF ASSEMBLY

7-1. General

The power takeoff houses the clutch, and when engaged, transmits power from the engine to the vibrator shaft through the drive belt. It is a dry-running clutch with single, one-piece molded driving disc with gear tooth engagement.

7-2. Removal

Remove belt (1), bolts (2), and washer (3) (para 5-4).

7-3. Disassembly (fig. D-3)

a. Remove bushing (4), pulley (5) and key (6).

b. Remove bolt (7), washer (8), and remove lever (9).

c. Remove screw (10), cover (11) and gasket (12).

d. Flatten washer (14). Remove nut (13) and washer (14).

e. Remove cotter pins (15) and pins (16).

f. Remove hub and back plate group (15), (17), (18), (19), (20), (21), (22), (23), (24), (25) and (26) as a unit.

g. Remove adjusting yoke group (15), (18), (23), (24), (25) and (26) as a unit.

h. Remove floating plate (19), driving plate (20), springs (21) and plate pin (22) from hub and back plate (17).

i. Remove cotter pins (15), pins (23), finger levers (24), lock pin (25) and spring (26) from adjusting yoke (17).

j. Remove key (27).

k. Remove lube fittings (28), nut (29), washer (30), hose fitting (31), hose (32) and hose fitting (33).

l. Remove sliding sleeve group (15), (34), (35), (36) and (37).

m. Remove cotter pins (15), pins (35), links (36) and release bearing (37) from sliding sleeve (34).

n. Remove bolts (38) and washers (39). Tap end of shaft (41) lightly until keys (40) become visible. Remove keys (40), shaft (41) and operating yoke (42).

o. Remove snap ring (43), shaft (44) and lube fitting (45).

p. Remove bolts (46), washers (47), bearing retainer (48) and remove bearing (49).

q. Remove lube fittings (50) from housing (51).

r. Remove bolts (52), washer (47), and remove driving ring (53).

s. Remove lock wires (54), bolts (55), washers (47), and remove adapter (56).

t. Remove bearing (57).

7-4. Cleaning—Inspection—Repair

a. Clean all parts with an approved cleaning solvent and dry thoroughly.

b. Inspect all parts for cracks, bad threads and excessive wear.

c. Inspect clutch shaft bearing surface for build-up of carbon. Polish with very fine emery cloth. Inspect that grease hole in end of shaft is open. Clean out with piece of wire.

d. Inspect bearing that it is smooth turning. Replace if rough turning or showing carbon build-up that will not clean off.

e. Inspect floating and back plates for extreme discoloration on surface that contacts driving plate. Replace if excessive.

f. Inspect driving plate for wear. Replace if wear is greater than ⅛ inch.

g. Inspect release bearing for excessive wear in the groove and that the trunnions have no flat areas. Replace the release bearing as a unit only when necessary.

7-5. Reassembly (fig. D-3)

Reassembly is the reverse of disassembly.

7-6. Installation (para 5-4)

a. Installation is the reverse of removal.

b. Adjust clutch after installation (para 4-11).

APPENDIX A

REFERENCES

A-1. Fire Protection

TB 5-4200-200-10	Hand Portable Fire Extinguishers for Army Users

A-2. Lubrication

C9100-IL	Fuels, Lubricants, Oils and Waxes
LO 5-3895-341-12	End Item LO
LO 5-2805-258-12	Engine LO

A-3. Painting

TM 9-213	Painting Instructions for Field Use

A-4. Radio Suppression

TM 11-483	Radio Interference Suppression

A-5. Maintenance

TM 38-750	Army Equipment Record Procedures
TM 5-2805-258-14	Operator, Organizational, Direct and General Support Maintenance Manual for Engine, Gasoline, 10 HP, Military Models 2A042-2 and 2A042-3
TM 5-2805-258-24P	Organizational, Direct and General Support Maintenance Repair Parts Manual for Gasoline Engine, Military Standard Models 2A042-2 and 2A042-3
TM 9-6140-200-15	Operator, Organizational, Field and Depot Maintenance Manual for Storage Batteries, Lead-Acid Type

A-6. Shipment and Storage

TM 740-90-1	Administrative Storage of Equipment
TM 750-244-3	Procedures for Destruction of Equipment to Prevent Enemy Use

APPENDIX B

BASIC ISSUE ITEMS LIST

Section I. INTRODUCTION

B-1. Scope

This appendix lists items which accompany the roller or are required for installation, operation, or operator's maintenance.

B-2. General

This Basic Issue Items List is divided into the following sections:

a. Basic Issue Items—Section II. A list of items which accompany the roller and are required by the crew / operator for installation, operation, or maintenance.

b. Maintenance and Operating Supplies—Section III. A listing of maintenance and operating supplies required for initial operation.

B-3. Explanation of Columns

The following provides an explanation of columns in the tabular list of Basic Issue Items, Section II.

a. Source, Maintenance, and Recoverability Codes (SMR):

(1) Source code indicates the source for the listed item. Source codes are:

Code	*Explanation*
P	Repair parts, Special Tools and Test Equipment supplied from the GSA / DSA, or Army supply system and authorized for use at indicated maintenance categories.
P2	Repair parts, Special Tools and Test Equipment which are procured and stocked for insurance purposes because the combat or military essentiality of the end item dictates that a minimum quantity be available in the supply system.
M	Repair parts, Special Tools and Test Equipment which are not procured or stocked, as such, in the supply system but are to be manufactured at indicated maintenance levels.
A	Assemblies which are not procured or stocked as such, but are made up of two or more units. Such component units carry individual stock numbers and descriptions, are procured and stocked separately and can be assembled to form the required assembly at indicated maintenance categories.
X	Parts and assemblies that are not procured or stocked because the failure rate is normally below that of the applicable end item or component. The failure of such part or assembly should result in retirement of the end item from the supply system.
X1	Repair parts which are not procured or stocked. The requirement for such items will be filled by use of the next higher assembly or component.
X2	Repair parts, Special Tools and Test Equipment which are not stocked and have no foreseen mortality. The indicated maintenance category requiring such repair parts will attempt to obtain the parts through cannibalization or salvage, the item may be requisitioned with exception data, from the end item manager, for immediate use.
G	Major assemblies that are procured with PEMA funds for initial issue only as exchange assemblies at DSU and GSU level. These assemblies will not be stocked above DS and GS level or returned to depot supply level.

(2) Maintenance code indicates the lowest category of maintenance authorized to install the listed item. The maintenance level code is:

Code	*Explanation*
C	Crew / Operator

(3) Recoverability code indicates whether unserviceable items should be returned for recovery or salvage. Items not coded are nonrecoverable. Recoverability codes are:

Code	*Explanation*
R	Applied to repair parts, (assemblies and components) special tools and test equipment which are considered economically reparable at direct and general support maintenance levels. When the item is no longer economically repairable, it is normally disposed of at the GS level. When supply considerations dictate, some of these repair parts may be listed for automatic return to supply for depot level repair as set forth in AR 710-50. When so listed, they will be replaced by supply on an exchange basis.
S	Repair parts, special tools, test equipment and assemblies which are economically reparable at DSU and GSU activities and which normally are furnished by supply on an exchange basis. When items are determined by a GSU to be uneconomically reparable, they will be evacuated to a depot for evaluation and analysis before final disposition.
T	High dollar value recoverable repair parts, special tools and test equipment which are subject to special handling and are issued on an exchange basis. Such items will be repaired or overhauled at depot maintenance activities only. No repair may be accomplished at lower levels.

U Repair parts, special toools and test equipment specifically selected for salvage by reclamation units because of precious metal content, critical materials, high dollar value or reusable casings or castings.

b. Federal Stock Number. This column indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description. This column indicates the Federal item name and any additional description of the item required. The abbreviation "w / e", when used as a part of the nomenclature, indicates the Federal stock number, includes all armament, equipment, accessories, and repair parts issued with the item. A part number or other reference number is followed by the applicable five-digit Federal supply code for manufacturers in parenthesis. Repair parts quantities included in kits, sets, and assemblies are shown in front of the repair part name.

d. Unit of Measure (U / M). A two-character alphabetic abbreviation indicating the amount or quantity of the item upon which the allowances are based, e.g., ft, ea, pr, etc.

e. Quantity Incorporated in Unit. This column indicates the quantity of the item used in the assembly group. A "V" appearing in this column in lieu of a quantity indicates that a definite quantity cannot be indicated (e.g., shims, spacers, etc.)

f. Quantity Furnished With Equipment. This column indicates the quantity of an item furnished with the equipment.

g. Illustration. This column is divided as follows:

(1) *Figure number.* Indicates the figure number of the illustration in which the item is shown.

(2) *Item number.* Indicates the callout number used to reference the item in the illustration.

B-4. Explanation of the Columns in the Tabular List of Maintenance and Operating Supplies—Section III

a. Component Application. This column identifies the component application of each maintenance or operating supply item.

b. Federal Stock Number. This column indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description. This column indicates the item name and brief description.

d. Quantity Required for Initial Operation. This column indicates the quantity of each maintenance or operating supply item required for initial operation of the equipment.

e. Quantity Required for Eight Hours Operation. This column indicates the estimated quantities required for an average 8 hours of operation.

f. Notes. This column indicates informative notes keyed to data appearing in a preceding column.

Section II. BASIC ISSUE ITEMS

(1) SMR code	(2) Federal stock number	(3) Description Ref No. & mfr Code — Usable on code	(4) Unit of meas	(5) Qty inc in unit	(6) Qty furn with equip	(7) Illustration (A) Fig No.	(7) Illustration (B) Item No.
PC	7510-889-3494	Binder: Equipment Log Book	Ea		1		
PC	7520-559-9618	Case: Operator and Maintenance Publications	Ea		1		
		Department of the Army Operator and Organizational Maintenance Manual TM 5-2805-258-14			1		
		DA Lubrication Order LO 5-3895-341-12			1		
		DA Technical Manual 5-3895-341-14 with Repair Parts			1		

Section III. MAINTENANCE AND OPERATING SUPPLIES

(1) Component application	(2) Federal stock number	(3) Description	(4) Quantity required F/ initial operation	(5) Quantity required F/ 8 hrs operation	(6) Notes
1. Tank Fuel	9130-160-1818 (1)	Fuel Gasoline: Automotive Bulk as follows: 91A Grade	10 GAL (3)	12.5 GAL (1)	(1) See C9100IL for additional data and requisitioning procedures.
2. Grease Points	9150-190-0905 (1)	Grease, Automotive and Artillery: 5 lb. can as follows: (2) GAA	as req.		(2) See current L. O. for Grade application and replenishment intervals.
	9150-663-9795 (1)	Grease, Ball and Roller Bearing: 5 lb. can as follows: (2) BR	as req.		(3) Tank capacity.

APPENDIX C

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

C-1. General

a. This section provides a general explanation of all maintenance and repair functions authorized at various maintenance levels.

b. Section II designates overall responsibility for the performance of maintenance functions on the identified end item or component. The implementation of the maintenance functions upon the end item or component will be consistent with the assigned maintenance functions

c. Section III. (Not applicable).

d. Section IV. (Not applicable).

C-2. Explanation of Columns in Section II

a. Group Number, Column (1). The assembly group is a numerical group assigned to each assembly in a top-down breakdown sequence. The applicable assembly groups are listed on the MAC in disassembly sequence beginning with the first assembly removed in a top-down disassembly sequence.

b. Functional Group, Column (2). This column contains a brief description of the components of each assembly group.

c. Maintenance Functions, Column (3). This column lists the various maintenance functions (A through K) and indicates the lowest maintenance category authorized to perform these functions. The symbol designations for the various maintenance categories are as follows:

C—Operator or crew
O—Organizational maintenance
F—Direct support maintenance
H—General support maintenance

The maintenance functions are defined as follows:

A—Inspect: To determine serviceability of an item bv comparing its physical, mechanical, and electrical characteristics with established standarda.

B—Test: To verify serviceability and to detect electrical or mechanical failure by use of test equipment.

C—Service: To clean, to preserve, to charge, and to add fuel, lubricants, cooling agents, and air. If it is desired that elements, such as painting and lubricating, be defined separately, they may be so listed.

D—Adjust: To rectify to the extent necessary to bring into proper operating range.

E—Aline: To adjust specified variable elements of an item to bring to optimum performance.

F—Calibrate: To determine the corrections to be made in the readings of instruments or test equipment used in precise measurement. Consists of the comparison of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared with the certified standard.

G—Install: To set up for use in an operational environment such as an emplacement, site, or vehicle.

H—Replace: To replace unserviceable items with serviceable like items.

I—Repair: Those maintenance operations necessary to restore an item to serviceable condition through correction of material damage or a specific failure. Repair may be accomplished at each category of maintenance.

J—Overhaul: Normally, the highest degree of maintenance performed by the Army in order to minimize time work in process is consistent with quality and economy of operation. It consists of that maintenance necessary to restore an item to completely serviceable condition as prescribed by maintenance standards in technical publications for each item of equipment. Overhaul nori ally does not return an item to like new, zero mileage, or zero hour condition.

K—Rebuild: The highest degree of material maintenance. It consists or restoring equipment as nearly as possible to new condition in accordance with original manufacturing standards. Rebuild is performed only when required by operational considerations or other paramount factors and then only at the depot maintenance category. Rebuild reduces to zero the hours or miles the equipment, or component thereof, has been in use.

d. Tools and Equipment, Column (4). This column is provided for referencing by code the special tools and test equipment. (section III) required to perform the maintenance functions (sec II).

e. Remarks, Column (5). This column is provided for referenceing by code the remarks (sec IV) pertinent to the maintenance functions.

Section II. MAINTENANCE ALLOCATION CHART

(1) Group No.	(2) Functional group	(3) Maintenance functions											(4) Tools and equipment	(5) Remarks
		A	B	C	D	E	F	G	H	I	J	K		
		Inspect	Test	Service	Adjust	Align	Overhaul	Install	Replace	Repair	Calibrate	Rebuild		
01	ENGINE ASSEMBLY			C					F					
	Temperature Switch								O					
	Muffler	C							O					
02	FUEL SYSTEM													
	Tank, Fuel								O					
	Fuel Strainer	C		O					O					
	Gauge, Fuel								O					
03	POWER TAKE-OFF CLUTCH ASSEMBLY				O					F				
	Drive Pulleys								F					
	Shafts								F					
	Bearings								F					
	Drive Belt				O				O					
04	CONTROL PANEL													
	Switches								O					
	Gauges								O					
05	BATTERY & BATTERY BOX													
	Battery	C	O	O					O					
	Battery Cables	C							O					
	Battery Box								O					
06	ROLL & SHAFT ASSEMBLY									F				
	Roll								F					
	Shaft								F					
	Bearings								F					
	Bushings								F					
	Axles								F					
	Scraper, Roll	O							O					
07	FRAME & TOWING ATTACHMENT													
	Tongue, Towing								O					
	Towing Eye								O					

APPENDIX D

REPAIR PARTS LIST

Section I. INTRODUCTION

D-1. Scope

a. This appendix lists repair parts, special tools, test and support equipment required for the performance of organizational, direct support and general support maintenance of the roller.

b. Repair parts listed represent those authorized for use at indicated maintenance levels and will be requisitioned (on an "as required" basis until stockage is justified by demand in accordance with AR 735-35 or AR 710-2).

D-2. General

This Repair Parts and Special Tools List is divided into the following sections:

a. Repair Parts—SectionII. A list, in figure and item number sequence, of repair parts authorized at the organizational level for the performance of maintenance, including those items which must be removed for replacement of the authorized item. Items are listed by assembly group in top down breakdown sequence.

b. Special Tools, Test and Support Equipment—Section III. A list of special tools, test and support equipment authorized for the performance of maintenance at the organizational level. (Not Applicable)

c. Repair Parts—Section IV. A list, in figure and item number sequence, of the repair parts authorized for the performance of maintenance at the direct support and general support levels, including those items which must be removed for replacement of the authorized item. Items are listed by assembly group in top down breakdown sequence.

d. Federal Stock Number and Reference Number Index—Section VI. A list of Federal Stock Numbers in ascending numerical sequence, followed by a list of reference numbers appearing in all listings, in ascending alpha-numeric sequence, cross-referenced to the illustration figure and item number.

3. Explanation of Columns

The following provides an explanation of columns in the tabular lists in Sections II through V.

a. Source, Maintenance, Recoverability Codes (SMR).

(1) Source code indicates the source for the listed items. Source Codes are:

Code	*Explanation*
P	Repair parts, Special Tools and Test Equipment supplied from the GSA / DSA, or Army supply system and authorized for use at indicated maintenance categories.
P2	Repair parts, Special Tools and Test Equipment which are procured and stocked for insurance purposes because the combat or military essentiality of the end item dictates that a minimum quantity be available in the supply system.
M	Repair parts, Special Tools and Test Equipment which are not procured or stocked, as such, in the supply system but are to be manufactured at indicated maintenance levels.
A	Assemblies which are not procured or stocked as such, but are made up of two or more units. Such component units carry individual stock numbers and descriptions, are procured and stocked separately and can be assembled to form the required assembly at indicated maintenance categories.
X	Parts and assemblies that are not procured or stocked because the failure rate is normally below that of the applicable end item or component. The failure of such part or assembly should result in retirement of the end item from the supply system.
X1	Repair parts which are not procured or stocked. The requirement for such items will be filled by use of the next higher assembly or component.
X2	Repair parts, Special Tools and Test Equipment which are not stocked and have no foreseen mortality. The indicated maintenance level requiring such repair parts will attempt to obtain the parts through cannibalization or salvage, if not obtainable through cannibalization or salvage, the item may be requisitioned with exception data, from the end item manager, for immediate use.
G	Major assemblies that are procured with PEMA funds for initial issue only as exchange assemblies at DSU and GSU level. These assemblies will not be stocked above DS and GS level or returned to depot supply level.

NOTE

Cannibalization or salvage may be used as a source of supply for any items source coded above except those coded X1 and aircraft support items as restricted by AR700-42.

(2) Maintenance code indicates the lowest level of maintenance authorized to install the listed item. Repair parts and special tools assigned Maintenance Code "C" may be stocked at the operator level of maintenance when authorized by the Unit Commander. The maintenance level codes are:

Code	Explanation
C	Crew or Operator maintenance
O	Organizational maintenance
F	Direct Support maintenance
H	General Support maintenance

(3) Recoverability code indicates whether unserviceable items should be returned for recovery or salvage. Items not coded are expendable. Recoverability codes are:

Code	Explanation
R	Applied to repair parts, (assemblies and components) special tools and test equipment which are considered economically reparable at direct and general support maintenance levels. When the item is no longer economically repairable, it is normally disposed of at the GS level. When supply considerations dictate, some of these repair parts may be listed for automatic return to supply for depot level repair as set forth in AR 710-50. When so listed, they will be replaced by supply on an exchange basis.
S	Repair parts, special tools, test equipment and assemblies which are economically reparable at DSU and GSU activities and which normally are furnished by supply on an exchange basis. When items are determined by a GSU to be uneconomically reparable, they will be evacuated to a depot for evaluation and analysis before final disposition.
T	High dollar value recoverable repair parts, special tools and test equipment which are subject to special handling and are issued on an exchange basis. Such items will be evacuated to the depot for overhaul or final disposition. Communication-Electronics and missile support items will be repaired / overhauled only at depots.
U	Repair parts, special tools and test equipment specifically selected for salvage by reclamation units because of precious metal content, critical materials, high dollar value or reusable casings or castings.

b. Federal Stock Number. Indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description. Indicates the Federal item name and any additional description of the item required. Assembly components and subassemblies are indented under major assemblies. The abbreviation "w / e" when used as part of the nomenclature, indicates the Federal stock number, includes all armament, equipment, accessories, and repair parts issued with the item. A part number or other reference number is followed by the applicable five-digit Federal supply code for manufacturers in parenthesis. Repair parts quantities included in kits and sets are shown in front of the repair part name. Material required for manufacture or fabrication is identified.

d. Unit of Measure (U / M). A two-character alphabetic abbreviation indicating the amount or quantity of the item, as used, upon which the allowances are based, e.g., ft., ea., pr., etc.

e. Quantity Incorporated in Unit. Indicates the quantity of the item used in the assembly group. A "V" appearing in this column in lieu of a quantity indicates that a definite quantity cannot be indicated, (e.g., shims, spacers, etc.).

f. Fifteen-Day Organizational Maintenance

(1) Items authorized for use as required but not for initial stockage are identified with an asterisk in the allowance column.

(2) The allowance columns are divided into four subcolumns. Indicated in each subcolumn is the total quantity of special tools authorized for the number of equipments supported. (Not Applicable)

g. Thirty-Day DS / GS Maintenance Allowance

(1) Items authorized for use as required but not for initial stockage are identified with an asterisk in the allowance column.

(2) The allowance columns are divided into three subcolumns. The quantitative allowance of special tools for DS / GS levels of maintenance will represent initial stockage for a 30-day period for the number of equipments supported. (Not Applicable)

h. Items Authorized.

(1) Items authorized for use as required but not for initial stockage are identified with an asterisk in the allowance column.

(2) This column indicates the total quantity of special tools required for distribution and contingency planning purposes. (Not Applicable)

i. Illustration. This column is divided as follows:

(1) *Figure number.* Indicates the figure number of the illustration on which the item is shown.

(2) *Item number.* Indicates the callout number used to reference the item on the illustration.

4. Special Information

a. Parts which require manufacture or assembly of a maintenance level higher than that authorized for installation will indicate in the source column the higher maintenance level.

b. The following publications pertain to roller and its components.

TM 5-2805-258-14	Operator, organizational, direct support and general support maintenance manual: Engine, gasoline, 10 hp, Military Standard models (model 2A042-2 and 2A042-3).
TM 5-2805-258-24P	Organizational, direct and general support maintenance repair parts and special tool lists: Engine, 10 hp,

	Military Standard models (model 2A042-2 and 2A042-3).
LO 5-2805-258-12	Engine, gasoline, 10 hp, Military Standard Models (model 2A042-2 and 2A042-3).
LO 5-3895-341-12	Roller, towed, vibrating, airmobile, gasoline engine driven (Essick Model VR55TM).

c. The same illustrations are used to illustrate the repair parts and special tools listed in both organizational maintenance section and direct and general support and depot maintenance section.

5. How to Locate Repair Parts

a. When the Federal Stock Number or Reference Number is Unknown:

(1) *First.* Using the table of contents, determine the assembly group within which the repair part belongs. This is necessary since illustrations are prepared for assembly groups, and listings are divided into the same groups.

(2) *Second.* Find the illustration covering the assembly group to which the repair part belongs.

(3) *Third.* Identify the repair part on the illustration and note the illustration figure and item number of the repair part.

(4) *Fourth.* Using the Repair Parts Listing, find the assembly group to which the repair part belongs and locate the illustration figure and item number noted on the illustration.

b. When the Federal Stock Number or Reference Number is Known:

(1) *First.* Using the Index of Federal Stock Numbers and Reference Numbers find the pertinent Federal stock number or reference number. This index is in ascending FSN sequence followed by a list of reference numbers in alpha-numeric sequence, cross-referenced to the illustration figure number and item number.

(2) *Second.* Using the Repair parts listing, find the assembly group of the repair part and the illustration figure number and item number referenced in the Index of Federal Stock Numbers and Reference Numbers.

c. When the Federal Stock Number or Reference Number is Known and the Repair Part is not Illustrated:

(1) *First.* Using the Index of Federal Stock Numbers and Reference Numbers find the pertinent Federal stock number or reference number in the section titled "Items Not Illustrated" and note the group number. This section is in ascending FSN sequence followed by a list of reference numbers in alpha-numeric sequence cross-referenced to assembly group number.

(2) *Second.* Using the Table of Contents, locate the assembly group number and page number.

(3) *Third.* Using the applicable group number and page number, locate the pertinent stock number or reference number in the Repair Parts Listing.

6. Abbreviations

BKT	Bracket
BRG	Bearing
DIA	Diameter
ENG	Engine
GA	Gauge
IN	Inch
LG	Long
MTG	Mounting
NO.	Number
NPT	National Pipe Thread
NPTF	National Pipe Thread Fine
PTO	Power Takeoff
SPEC	Specification
TEMP	Temperature
THD	Thread
THK	Thick
W/	With

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALW (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(7) ILLUSTRATION (a) FIG. NO.	(b) ITEM NO.
		SECTION II - REPAIR PARTS FOR ORGANIZATIONAL MAINTENANCE									
		GROUP 01 - ENGINE ASSEMBLY									
P 0	2990-691-3185	MUFFLER WD66 (66289)		EA	1	•	•	•	•	D1	8
P 0		ELBOW, EXHAUST: 45 DEG STREET, 1 IN. NPT 911111 (20988)		EA	1	•	•	•	•	D1	9
P 0		NIPPLE, EXHAUST: 1 1/4 IN. NPT, 3 IN. LG 912110 (20988)		EA	1	•	•	•	•	D1	10
P 0	5310-732-0558	NUT, LOCK, HEXAGON: EXHAUST FLANGE MTG, 3/8-16 THD SIZE MS51967-8 (96906)		EA	2	•	•	•	•	D1	11
P 0	5310-637-9541	WASHER, LOCK: EXHAUST FLANGE MTG, 3/8 IN. SCREW SIZE MS35338-46 (96906)		EA	2	•	•	•	•	D1	12
P 0	5305-269-3215	SCREW, CAP, HEXAGON HEAD: EXHAUST FLANGE MTG, 3/8-16 THD SIZE, 1 3/4 IN. LG MS90725-65 (96906)		EA	2	•	•	•	•	D1	13
X20		FLANGE, EXHAUST 104904 (20988)		EA	1					D1	14
P 0	6150-405-4826	WIRE ASSEMBLY: TEMPERATURE SWITCH TO MAGNETO 105022 (20988)		EA	1	•	•	•	•	D1	15
P 0	5930-111-1831	SWITCH, TEMPERATURE 363AE (57733)		EA	1	•	•	•	•	D1	16
X20		ADAPTER, MODIFIED: ENGINE OIL PAN 105021 (20988)		EA	1					D1	17
		GROUP 02 - FUEL SYSTEM									
P 0	4730-187-4201	PLUG, PIPE, SQUARE HEAD: TANK DRAIN, 1/4 IN. NPT WMP471 (81348)		EA	1	•	•	•	•	D2	1
P 0	5310-655-7145	NUT, LOCK, HEXAGON: FUEL HOSE CLAMP MTG, 5/16-18 THD SIZE 42NE058 (72962)		EA	1	•	•	•	•	D2	2
P 0	5310-584-5272	WASHER, FLAT: HOSE CLAMP MTG, 1/2 IN. SCREW SIZE MS35338-48 (96906)		EA	1	•	•	•	•	D2	3
P 0	5306-753-4322	BOLT, MACHINE, HEXAGON HEAD: HOSE CLAMP MTG, 5/16-18 THD SIZE, 1 IN. LG MS51095-334 (96906)		EA	1	•	•	•	•	D2	4
P 0	5340-432-4025	CLAMP: FUEL HOSE MTG TA6397D8 (84971)		EA	2	•	•	•	•	D2	5
P 0		HOSE ASSEMBLY, FUEL: ENGINE 105019 (20988)		EA	1	•	•	•	•	D2	6
P 0		ELBOW: FUEL PUMP 911004 (20988)		EA	1	•	•	•	•	D2	7
X20		ADAPTER: FUEL HOSE 8354H (30327)		EA	2					D2	8
P 0		BUSHING: FUEL FILTER 911238 (20988)		EA	1	•	•	•	•	D2	9
X20	2805-413-6178	VENT, AIR: FUEL TANK 304810 (95879)		EA	1					D2	10

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALW (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(7) ILLUSTRATION (a) FIG. NO.	(b) ITEM NO.
P O	2910-425-5900	CAP, FUEL TANK 105018 (20988)		EA	1	•	•	•	•	D2	11
P O		GAGE, FUEL 6680L12H70 (09393)		EA	1	•	•	•	•	D2	12
P O	5310-763-8905	NUT, LOCK, HEXAGON: FUEL TANK MTG, 5/8-18 THD SIZE MS51968-20 (96906)		EA	4	•	•	•	•	D2	13
P O	5305-725-4105	SCREW, CAP, HEXAGON HEAD: HEAT TREAT, FUEL TANK MTG, 5/8-18 THD SIZE, 2 IN. LG MS90726-16A (96906)		EA	4	•	•	•	•	D2	14
X20		STRAP: FUEL TANK MTG 10A766 (20988)		EA	2					D2	15
P O	2910-425-5899	TANK, FUEL 10A765 (20988)		EA	1	•	•	•	•	D2	16
		GROUP 03 - POWER TAKE-OFF CLUTCH ASSEMBLY									
P O	3030-758-9704	BELT, DRIVE 4-3V850 (11288)		EA	1	•	•	•	•	D3	1
P O	5305-475-0631	SCREW, CAP, HEXAGON HEAD: HEAT TREAT, CLUTCH HAND LEVER, 1/2-13 THD SIZE M20048R (61208)		EA	1	•	•	•	•	D3	7
P O	5310-194-1483	WASHER, LOCK: INTERNAL TOOTH, HAND LEVER MTG, 1/2 IN. SCREW SIZE MS35333-44 (96906)		EA	1	•	•	•	•	D3	8
X20	3040-653-9200	LEVER, HAND 3799 (61208)		EA	1					D3	9
P O	5305-236-3598	SCREW, MACHINE: COVER PLATE MTG, 1/4-20 THD SIZE, 1/2 IN. LG M20239F (61208)		EA	2	•	•	•	•	D3	10
X20		PLATE, INSTRUCTION COVER 1965A (61208)		EA	1					D3	11
P O	5330-414-9267	GASKET: INSTRUCTION COVER PLATE A1339A (61208)		EA	1	•	•	•	•	D3	12
P O	4730-050-4208	FITTING, LUBRICATION: CLUTCH, 1/8 IN. NPTF MS15003-1 (96906)		EA	2	•	•	•	•	D3	28
P O	5310-655-7423	NUT, JAM, HEXAGON: CLUTCH, 5/8-18 THD SIZE M2027AN (61208)		EA	1	•	•	•	•	D3	29
P O	5310-543-4385	WASHER, LOCK: INTERNAL TOOTH, CLUTCH, 5/8 IN. SCREW SIZE MS35333-46 (96906)		EA	1	•	•	•	•	D3	30
P O	4730-048-1788	FITTING, LUBRICATION: CLUTCH, 1/4 IN. NPTF 6026 (03990)		EA	1	•	•	•	•	D3	45
P O	4730-050-4203	FITTING, LUBRICATION: CLUTCH, 1/4-28 THD SIZE 6009 (03990)		EA	2	•	•	•	•	D3	50
		GROUP 04 - CONTROL PANEL									
P O	5305-984-4988	SCREW, MACHINE: CONTROL PANEL BOX, NO. 6-32 THD SIZE, 3/8 IN. LG MS35206-228 (96906)		EA	10	•	•	•	•	D4	1
P O	5975-280-6079	NUT, LOCK, HEXAGON: CONTROL PANEL BOX MS39081-10 (96906)		EA	1	•	•	•	•	D4	2

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALW (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(7) ILLUSTRATION (a) FIG. NO.	(b) ITEM NO.
P O	5310-432-4466	WASHER, RUBBER: ELECTRICAL INLET PLUG 105009 (20988)		EA	1	•	•	•	•	DA	3
P O	5310-432-4467	WASHER, FLAT: ELECTRICAL INLET PLUG 300490 (20988)		EA	1	•	•	•	•	DA	4
P O	5935-431-4889	PLUG, WIRE ASSEMBLY 105011 (20988)		EA	1	•	•	•	•	DA	5
P O	5310-208-1919	NUT, LOCK, HEXAGON: BOX SUPPORT ANGLE MTG, 1/4-20 THD SIZE 29ME040 (72962)		EA	4	•	•	•	•	DA	6
P O	5305-068-0502	SCREW, CAP, HEXAGON HEAD: BOX SUPPORT ANGLE MTG, 1/4-20 THD SIZE, 3/4 IN. LG MS90725-6 (96906)		EA	4	•	•	•	•	DA	7
X20		BRACKET, PANEL 104965 (20988)		EA	1					DA	8
P O		DAMPENER, PANEL 105007 (20988)		EA	1	•	•	•	•	DA	9
X20		BOX, CONTROL PANEL 104968 (20988)		EA	1					DA	10
P O	6150-405-2211	WIRE ASSEMBLY: START SWITCH TO HOURMETER 105015 (20988)		EA	1	•	•	•	•	DA	11
P O	6150-428-7518	WIRE ASSEMBLY: HOURMETER TO OIL PRESSURE GAGE 105017 (20988)		EA	1	•	•	•	•	DA	12
P O	6150-405-2205	WIRE ASSEMBLY: RUN-STOP SWITCH TO START SWITCH 105012 (20988)		EA	1	•	•	•	•	DA	13
P O		WIRE ASSEMBLY: RUN-STOP SWITCH TO OIL PRESSURE SWITCH 105013 (20988)		EA	1	•	•	•	•	DA	14
P O		WIRE ASSEMBLY: RUN-STOP SWITCH TO AMMETER 105016 (20988)		EA	1	•	•	•	•	DA	15
P O	6150-405-4825	WIRE ASSEMBLY: RUN-STOP SWITCH TO OIL PRESSURE GAGE 105014 (20988)		EA	1	•	•	•	•	DA	16
P O	5305-889-3000	SCREW, MACHINE: CONTROL PANEL COVER MTG, NO. 6-32 THD SIZE, 1/2 IN. LG MS35206-230 (96906)		EA	6	•	•	•	•	DA	17
P O	6645-089-8842	METER, HOUR MODEL 771 (26992)		EA	1	•	•	•	•	DA	18
P O	5310-579-0079	WASHER, LOCK: INTERNAL TOOTH, CONTROL PANEL COVER MTG, NO. 6 THD SIZE MS35333-37 (96906)		EA	6	•	•	•	•	DA	19
P O	2815-786-1564	DAMPENER: HOURMETER M3888 (57733)		EA	1	•	•	•	•	DA	20
P O	6620-056-9584	GAGE, OIL PRESSURE 505T (57733)		EA	1	•	•	•	•	DA	21
P O	6625-272-9928	AMMETER 359L (57733)		EA	1	•	•	•	•	DA	22
P O	5930-695-1582	SWITCH, TOGGLE: ENGINE RUN-STOP MS35059-23 (96906)		EA	1	•	•	•	•	DA	23
P O	5930-695-1521	SWITCH, TOGGLE: OIL PRESSURE MS35058-29 (96906)		EA	1	•	•	•	•	DA	24

(1) Group Code	(2) Federal Stock Number	(3) DESCRIPTION REF NUMBER & MFR CODE / USABLE ON CODE	(4) Unit of Meas	(5) Qty Inc in Unit	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALW (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(7) ILLUSTRATION (a) Fig. No.	(b) Item No.
P O	5930-655-1522	SWITCH, TOGGLE: ENGINE START MS35058-30 (96906)	EA	1	•	•	•	•	04	25
X20		PLATE, INDICATING 104972 (20988)	EA	1					04	26
X20		COVER, CONTROL PANEL 104967 (20988)	EA	1					04	27
		GROUP 05 - BATTERY AND BATTERY BOX								
P O	5310-655-7145	NUT, LOCK, HEXAGON: BATTERY TRAY MTG, 5/16-18 THD SIZE 42NE058 (72962)	EA	12	•	•	•	•	05	1
P O	5310-081-4219	WASHER, FLAT: BATTERY HOLD-DOWN, GROUND CABLE AND CLAMP MTG, 5/16 IN. SCREW SIZE MS27183-12 (96906)	EA	4	•	•	•	•	05	2
P O	5306-753-4322	SCREW, CAP, HEXAGON HEAD: CABLE CLAMP MTG, 5/16-18 THD SIZE, 1 IN. LG MS51095-334 (96906)	EA	2	•	•	•	•	05	3
P O		CABLE, GROUND: BATTERY 105004 (20988)	EA	1	•	•	•	•	05	4
P O	6150-257-1472	CABLE, JUMPER: BATTERY 105005 (20988)	EA	1	•	•	•	•	05	5
P O	5340-432-4021	CLAMP, CABLE: BATTERY TA61157 (84971)	EA	3	•	•	•	•	05	6
P O	5325-432-4739	GROMMET: BATTERY BOX 11022 (98388)	EA	1	•	•	•	•	05	7
P O		CABLE, LEAD: BATTERY 105006 (20988)	EA	1	•	•	•	•	05	8
X20		BOLT, HOLD-DOWN: BATTERY 101643 (20988)	EA	2					05	9
X20		HOLD-DOWN, BATTERY 104770 (20988)	EA	1					05	10
P O	6140-057-2553	BATTERY: 12V 2HN11 (88169)	EA	2	•	•	•	•	05	11
P O	5310-984-3806	NUT, LOCK, HEXAGON: BATTERY TRAY MTG, 5/16-18 THD SIZE MS51922-9 (96906)	EA	8	•	•	•	•	05	12
P O	5306-450-0372	MOUNTING, FLEXIBLE BOLT: BATTERY TRAY MTG J46243 (76005)	EA	8	•	•	•	•	05	13
X20		TRAY, BATTERY 104769 (20988)	EA	1					05	14
P O	5310-208-1918	NUT, LOCK, HEXAGON: HASP MTG, NO. 10-24 THD SIZE AN365-1024A (88044)	EA	4	•	•	•	•	05	15
P O	5305-984-6210	SCREW, MACHINE: HASP MTG, NO. 10-24 THD SIZE, 1/2 IN. LG MS35206-263 (96906)	EA	4	•	•	•	•	05	16
X20		HASP: BATTERY BOX 2033 (78252)	EA	2					05	17
		GROUP 06 - ROLL AND SHAFT ASSEMBLY								
P O	4730-172-0034	FITTING, LUBRICATION: FLEXIBLE MOUNT BUSHING, 90 DEG X 1/8 IN. NPTF 6007 (03990)	EA	2	•	•	•	•	06	12

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P O	4730-050-4208	FITTING: LUBRICATION, VIBRATOR SHAFT BEARING, 1/8 IN. NPTF MS15003-1 (96906)	EA	2	*	*	*	*	D6	24
		GROUP 07 - FRAME AND TOWING ATTACHMENTS								
P O	5310-087-4652	NUT, LOCK, HEXAGON: GUARD MTG, 3/8-16 THD SIZE MS51922-17 (96906)	EA	5	*	*	*	*	D7	1
P O	5305-269-3211	SCREW, CAP, HEXAGON HEAD: GUARD MTG, 3/8-16 THD SIZE, 1 IN. LG MS90725-60 (96906)	EA	5	*	*	*	*	D7	2
X20		GUARD, BELT 104773 (20988)	EA	1					D7	3
P O	5305-253-5614	SCREW, DRIVE: PLATE MTG, NO. 4 X 3/16 IN. LG, TYPE U MS21318-20 (96906)	EA	12	*	*	*	*	D7	4
X20		PLATE, INSTRUCTION 105025 (20988)	EA	1					D7	5
P O	5305-450-0385	SCREW, LOCK, HEXAGON HEAD: COVER PLATE MTG, 3/8-16 THD SIZE, 3/4 IN. LG 967016 (20988)	EA	4	*	*	*	*	D7	6
P O	5310-595-7237	WASHER, LOCK: INTERNAL TOOTH, COVER PLATE MTG, 3/8 IN. SCREW SIZE MS35333-42 (96906)	EA	4	*	*	*	*	D7	7
X20		PLATE, COVER: DRIVEN PULLEY 104856 (20988)	EA	1					D7	8
P O	5310-732-0558	NUT, LOCK, HEXAGON: SCRAPER MTG, 3/8-16 THD SIZE MS51967-8 (96906)	EA	8	*	*	*	*	D7	9
P O	5310-209-1962	WASHER, FLAT: SCRAPER MTG, 3/8 IN. SCREW SIZE 61-0542-1 (42280)	EA	8	*	*	*	*	D7	10
P O	5305-269-3214	SCREW, CAP, HEXAGON HEAD: SCRAPER MTG, 3/8-16 THD SIZE, 1 1/2 IN. LG MS90725-64 (96906)	EA	8	*	*	*	*	D7	11
P O	3895-425-5901	SCRAPER, ROLL 101465 (20988)	EA	1	*	*	*	*	D7	12
P O	5310-980-7524	NUT, LOCK, HEXAGON: TONGUE MTG, 3/4-10 THD SIZE 49NE120 (72962)	EA	6	*	*	*	*	D7	13
P O	5310-763-8921	NUT, HEXAGON: TONGUE MTG, 3/4-10 THD SIZE MS51967-23 (96906)	EA	4	*	*	*	*	D7	14
P O	5310-838-1702	NUT, JAM, HEXAGON: TONGUE MTG, 3/4-10 THD SIZE MS35691-57 (96906)	EA	2	*	*	*	*	D7	15
X20		WASHER, BEVELED: TONGUE MTG, 3/4 IN. SCREW SIZE 923618 (20988)	EA	2					D7	16
P O	5305-716-6318	SCREW, CAP, HEXAGON HEAD: HEAT TREAT, TONGUE MTG, 3/4-10 THD SIZE, 2 3/4 IN. LG 963560 (20988)	EA	6	*	*	*	*	D7	17
X20		TONGUE, TOWING 104751 (20988)	EA	1					D7	18
P O	5315-187-9600	PIN, COTTER: TOWING EYE, 3/8 IN. DIA, 4 IN. LG MS24665-754 (96906)	EA	1	*	*	*	*	D7	19

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALW (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(7) ILLUSTRATION (a) FIG. NO.	(b) ITEM NO.
P O	5310-450-0317	NUT, SLOTTED, HEXAGON: TOWING EYE, 1 3/4 IN. THD SIZE 968433 (20988)		EA	1	*	*	*	*	D7	20
P O	5310-432-8206	WASHER, FLAT: TOWING EYE, 1 3/4 IN. SCREW SIZE 923180 (20988)		EA	2	*	*	*	*	D7	21
X20		EYE, TOWING 104750 (20988)		EA	1					D7	22
X20		PIN, STAND 925128 (20988)		EA	2					D7	23
X20		STAND 104843 (20988)		EA	2					D7	24
X20		PLATE, IDENTIFICATION 105023 (20988)		EA	1					D7	25
X20		PLATE, TRANSPORTATION 105024 (20988)		EA	1					D7	26

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE / USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1-YR ALW PER 100 EQUIP CNTGY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION (a) FIG NO.	(b) ITEM NO
		SECTION IV - REPAIR PARTS FOR DS, GS MAINTENANCE												
		GROUP 01 - ENGINE ASSEMBLY												
P F	5305-269-3214	SCREW, CAP, HEXAGON HEAD: HEAT TREAT, CLUTCH MTG, 3/8-16 THD SIZE, 1 1/2 IN. LG MS90725-64 (96906)	EA	2	•	•	•	•	•	•	•	•	D1	1
P F	5310-209-1962	WASHER, FLAT: CLUTCH SUPPORT, 3/8 IN. SCREW SIZE 61-052-1 (A2280)	EA	2	•	•	•	•	•	•	•	•	D1	2
P F	5310-595-7237	WASHER, LOCK: INTERNAL TOOTH, ENGINE AND CLUTCH SUPPORT MTG, 3/8 IN. SCREW SIZE MS35333-42 (96906)	EA	6	•	•	•	•	•	•	•	•	D1	3
P F	5310-595-7421	NUT, LOCK, HEXAGON: ENGINE BRACKET MTG, 1/2-13 THD SIZE MS17829-8C (96906)	EA	3	•	•	•	•	•	•	•	•	D1	4
P F	5305-042-6417	SCREW, CAP, HEXAGON HEAD: HEAT TREAT, ENGINE BRACKET MTG, 1/2-13 THD SIZE, 1 1/2 IN. LG MS90725-113 (96906)	EA	3	•	•	•	•	•	•	•	•	D1	5
X2F		SUPPORT, POWER TAKE-OFF 104899 (20988)	EA	1									D1	6
P F	5365-472-5296	SHIM, LEVELING: 18 GAGE THK 104901 (20988)	EA	1	•	•	•	•	•	•	•	•	D1	7
P F	5365-451-8980	SHIM, LEVELING: 16 GAGE THK 104900 (20988)	EA	1	•	•	•	•	•	•	•	•	D1	7
P O	2990-691-3185	MUFFLER W066 (66289)	EA	1	•	•	•	•	•	•	•	•	D1	8
P O		ELBOW, EXHAUST: 45 DEG STREET, 1 IN. NPT 911111 (20988)	EA	1	•	•	•	•	•	•	•	•	D1	9
P O		NIPPLE, EXHAUST: 1 1/4 IN. NPT, 3 IN. LG 912110 (20988)	EA	1	•	•	•	•	•	•	•	•	D1	10
P O	5310-732-0958	NUT, LOCK, HEXAGON: EXHAUST FLANGE MTG, 3/8-16 THD SIZE MS51967-8 (96906)	EA	2	•	•	•	•	•	•	•	•	D1	11
P O	5310-637-9541	WASHER, LOCK: EXHAUST FLANGE MTG, 3/8 IN. SCREW SIZE MS35338-46 (96906)	EA	2	•	•	•	•	•	•	•	•	D1	12
P O	5305-269-3215	SCREW, CAP, HEXAGON HEAD: EXHAUST FLANGE MTG, 3/8-16 THD SIZE, 1 3/4 IN. LG MS90725-65 (96906)	EA	2	•	•	•	•	•	•	•	•	D1	13
X20		FLANGE, EXHAUST 104904 (20988)	EA	1									D1	14
P O	6150-405-4826	WIRE ASSEMBLY: TEMPERATURE SWITCH TO MAGNETO 105022 (20988)	EA	1	•	•	•	•	•	•	•	•	D1	15
P O	5930-111-1831	SWITCH, TEMPERATURE 363AE (57733)	EA	1	•	•	•	•	•	•	•	•	D1	16
X20		ADAPTER, MODIFIED: ENGINE OIL PAN 105021 (20988)	EA	1									D1	17
M F		WIRE, LOCK: SCREW RETAINING, REAR ENGINE MTG BRACKET 00A123 (81348) MANUFACTURE FROM:	SL	2									D1	18
P F	9505-242-7527	WIRE, STEEL, 18 GAGE X 11 IN. LG			•	•	•	•	•	•	•	•		

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1-YR ALW PER 100 EQUIP ENTRY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION (a) FIG NO	(b) ITEM NO
P F	5305-939-1185	SCREW, CAP, HEXAGON HEAD: HEAT TREAT, ENGINE SUPPORT MTG, 3/8-16 THD SIZE, 1 1/4 IN. LG MS51095-361 (96906)		EA	4	•	•	•	•	•	•	•	•	D1	19
P F	5306-753-4322	BOLT, MACHINE, HEXAGON HEAD: HEAT TREAT, ENGINE BRACKET MTG, 5/16-18 THD SIZE, 1 IN. LG MS51095-334 (96906)		EA	10	•	•	•	•	•	•	•	•	D1	20
P F	5310-407-9566	WASHER, LOCK: ENGINE BRACKET MTG, 5/16 IN. SCREW SIZE MS35338-45 (96906)		EA	6	•	•	•	•	•	•	•	•	D1	21
X2F		BRACKET: ENGINE SUPPORT 104895 (20988)		EA	2									D1	22
M F		WIRE, LOCK: SCREW RETAINING, END ENGINE MTG BRACKET QQW23 (81348) MANUFACTURE FROM:		SL	4									D1	23
P F	9505-242-7527	WIRE, STEEL, 18 GAGE X 9 IN. LG				•	•	•	•	•	•				
X2F		BRACKET : ENGINE SUPPORT 104898 (20988)		EA	1									D1	24
P F	5310-838-1702	NUT, JAM, HEXAGON: ENGINE BASE MTG, 3/4-10 THD SIZE MS35691-57 (96906)		EA	8	•	•	•	•	•	•	•	•	D1	25
X2F		BASE, ENGINE 105010 (20988)		EA	1									D1	26
P F	2805-872-5971	ENGINE, GASOLINE: MODEL 2A0A2-3 1320E0500 (97403)		EA	1	•	•	•	•	•	•	•	•	D1	27
		GROUP 02 - FUEL SYSTEM													
P O	4730-187-4201	PLUG, PIPE, SQUARE HEAD: TANK DRAIN, 1/4 IN. NPT WMP471 (81348)		EA	1	•	•	•	•	•	•	•	•	D2	1
P O	5310-695-7185	NUT, LOCK, HEXAGON: FUEL HOSE CLAMP MTG, 5/16-18 THD SIZE 42NE058 (72962)		EA	1	•	•	•	•	•	•	•	•	D2	2
P O	5310-584-5272	WASHER, FLAT: HOSE CLAMP MTG, 1/2 IN. SCREW SIZE MS35338-48 (96906)		EA	1	•	•	•	•	•	•	•	•	D2	3
P O	5306-753-4322	BOLT, MACHINE, HEXAGON HEAD: HOSE CLAMP MTG, 5/16-18 THD SIZE, 1 IN. LG MS51095-334 (96906)		EA	1	•	•	•	•	•	•	•	•	D2	4
P O	5340-432-4025	CLAMP: FUEL HOSE MTG TA639TD8 (89971)		EA	2	•	•	•	•	•	•	•	•	D2	5
P O		HOSE ASSEMBLY, FUEL: ENGINE 105019 (20988)		EA	1	•	•	•	•	•	•	•	•	D2	6
P O		ELBOW: FUEL PUMP 911004 (20988)		EA	1	•	•	•	•	•	•	•	•	D2	7
X2D		ADAPTER: FUEL HOSE 83564 (30327)		EA	2									D2	8
P O		BUSHING: FUEL FILTER 911238 (20988)		EA	1	•	•	•	•	•	•	•	•	D2	9
X2D	2805-413-6178	VENT, AIR: FUEL TANK 304810 (95879)		EA	1									D2	10
P O	2910-425-5900	CAP, FUEL TANK 105018 (20988)		EA	1	•	•	•	•	•	•	•	•	D2	11

(1)	(2)	(3)	(4)	(5)	(6)			(7)			(8)	(9)	(10)	
		DESCRIPTION			30-DAY DS MAINT ALLOWANCE			30-DAY GS MAINT ALLOWANCE					ILLUSTRATION	
SMR CODE	FEDERAL STOCK NUMBER	REF NUMBER & MFR CODE / USABLE ON CODE	UNIT OF MEAS	QTY INC IN UNIT	(a) 1-30	(b) 31-50	(c) 51-100	(a) 1-20	(b) 21-30	(c) 31-100	1-YR ALW PER 100 EQUIP CNTGY	DEPOT MAINT ALW PER 100 EQUIP	(a) FIG. NO.	(b) ITEM NO.
P O		GAGE, FUEL 6680L12H70 (09393)	EA	1	•	•	•	•	•	•	•	•	D2	12
P O	5310-763-8905	NUT, LOCK, HEXAGON: FUEL TANK MTG, 5/8-18 THD SIZE MS51968-20 (96906)	EA	4	•	•	•	•	•	•	•	•	D2	13
P O	5305-725-4105	SCREW, CAP, HEXAGON HEAD: HEAT TREAT, FUEL TANK MTG, 5/8-18 THD SIZE, 2 IN. LG MS90726-16A (96906)	EA	4	•	•	•	•	•	•	•	•	D2	14
X20		STRAP: FUEL TANK MTG 104766 (20988)	EA	2									D2	15
P O	2910-425-5899	TANK, FUEL 104765 (20988)	EA	1	•	•	•	•	•	•	•	•	D2	16
		GROUP 03 - POWER TAKE-OFF CLUTCH ASSEMBLY												
P F	2990-425-5902	POWER TAKE-OFF CLUTCH: SPEC 33772 C1065P6 (61208)	EA	1	•	•	•	•	•	•	•	•	D3	
P O	3030-758-9704	BELT, DRIVE 4-3V850 (11288)	EA	1	•	•	•	•	•	•	•	•	D3	1
P F	5305-269-3213	SCREW, LOCK, HEXAGON HEAD: HEAT TREAT, CLUTCH MTG, 3/8-16 THD SIZE, 1 1/8 IN. LG MS90725-62 (96906)	EA	6	•	•	•	•	•	•	•	•	D3	2
P F	5310-595-7237	WASHER, LOCK: INTERNAL TOOTH, POWER TAKE-OFF MTG, 3/8 IN. SCREW SIZE MS35333-42 (96906)	EA	6	•	•	•	•	•	•	•	•	D3	3
P F	5365-197-7885	BUSHING, PULLEY: SHAFT, 1 7/16 IN. BORE SH17-16 (24161)	EA	1	•	•	•	•	•	•	•	•	D3	4
P F	3020-425-5829	PULLEY, DRIVE 4-3V360D (11288)	EA	1	•	•	•	•	•	•	•	•	D3	5
P F	5315-432-4337	KEY: DRIVE PULLEY, 3/8 IN. SQUARE, 1 1/2 IN. LG 010021 (20988)	EA	1	•	•	•	•	•	•	•	•	D3	6
P O	5305-475-0631	SCREW, CAP, HEXAGON HEAD: HEAT TREAT, CLUTCH HAND LEVER, 1/2-13 THD SIZE H2004R (61208)	EA	1	•	•	•	•	•	•	•	•	D3	7
P O	5310-194-1483	WASHER, LOCK: INTERNAL TOOTH, HAND LEVER MTG, 1/2 IN. SCREW SIZE MS35333-44 (96906)	EA	1	•	•	•	•	•	•	•	•	D3	8
X20	3040-653-9200	LEVER, HAND 3799 (61208)	EA	1									D3	9
P O	5305-236-3598	SCREW, MACHINE: COVER PLATE MTG, 1/4-20 THD SIZE, 1/2 IN. LG H2023F (61208)	EA	2	•	•	•	•	•	•	•	•	D3	10
X20		PLATE, INSTRUCTION COVER 1965A (61208)	EA	1									D3	11
P O	5330-414-9267	GASKET: INSTRUCTION COVER PLATE A1339A (61208)	EA	1	•	•	•	•	•	•	•	•	D3	12
P F	5310-189-8832	NUT, SHAFT 2727 (61208)	EA	1	•	•	•	•	•	•	•	•	D3	13
P F	5310-423-8022	WASHER, LOCK: HUB NUT A1587 (61208)	EA	1	•	•	•	•	•	•	•	•	D3	14
P F	5315-236-8315	PIN, COTTER: CLUTCH, 1/32 IN. DIA, 1/2 IN. LG MS24665-5 (96906)	EA	12	•	•	•	•	•	•	•	•	D3	15

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P F	2520-690-8983	PIN, HEADED: LEVER LINK B1537B (61208)		EA	4	•	•	•	•	•	•	•	•	D3	16
X2F	3010-423-8028	HUB AND BACK PLATE A3024 (61208)		EA	1									D3	17
X2F	2520-366-7191	YOKE, ADJUSTING 3206 (61208)		EA	1									D3	18
X2F	3010-362-2951	PLATE, FLOATING 3951 (61208)		EA	1									D3	19
X1		PLATE, DRIVING A3507 (61208)		EA	1									D3	20
X2F	3895-200-6367	SPRING, RELEASE A2286 (61208)		EA	6									D3	21
X2F	5315-244-3906	PIN, PLATE 11003 (61208)		EA	1									D3	22
P F	5315-069-7465	PIN, HEADED: FINGER B1537A (61208)		EA	4	•	•	•	•	•	•	•	•	D3	23
X2F	3010-423-8040	LEVER, FINGER 2411 (61208)		EA	4									D3	24
X2F	5315-362-2948	PIN, LOCK, ADJUSTING 2042 (61208)		EA	1									D3	25
X2F	3010-362-2954	SPRING: ADJUSTING LOCK PIN 1382 (61208)		EA	1									D3	26
P F	5315-281-7549	KEY, CLUTCH: 1/4 IN. SQUARE, 1 7/8 IN. LG 178-3769 (25681)		EA	1	•	•	•	•	•	•	•	•	D3	27
P O	4730-050-4208	FITTING, LUBRICATION: CLUTCH, 1/8 IN. NPTF MS15003-1 (96906)		EA	2	•	•	•	•	•	•	•	•	D3	28
P O	5310-655-7423	NUT, JAM, HEXAGON: CLUTCH, 5/8-18 THD SIZE M2027AN (61208)		EA	1	•	•	•	•	•	•	•	•	D3	29
P O	5310-543-4385	WASHER, LOCK: INTERNAL TOOTH, CLUTCH, 5/8 IN. SCREW SIZE MS35333-46 (96906)		EA	1	•	•	•	•	•	•	•	•	D3	30
P F		FITTING, HOSE: CLUTCH 100-00157 (79470)		EA	1	•	•	•	•	•	•	•	•	D3	31
P F	3820-802-2038	HOSE, FLEXIBLE H1292A (61208)		EA	1	•	•	•	•	•	•	•	•	D3	32
P F	4730-277-8273	FITTING, HOSE: CLUTCH 400X4 (79470)		EA	1	•	•	•	•	•	•	•	•	D3	33
X2F	3010-366-7189	SLEEVE, SLIDING 2969 (61208)		EA	1									D3	34
P F	5315-069-4766	PIN, HEADED: LEVER LINK B1537C (61208)		EA	4	•	•	•	•	•	•	•	•	D3	35
X2F	3910-423-8042	LINK, LEVER 2968 (61208)		EA	8									D3	36
X1		BEARING, RELEASE X1170B (61208)		EA	1									D3	37
P F	5305-269-3217	SCREW, CAP, HEXAGON HEAD: HEAT TREAT, OPERATING YOKE, 3/8-16 THD SIZE, 1 1/2 IN. LG MS90725-67 (96906)		EA	2	•	•	•	•	•	•	•	•	D3	38
P F		WASHER, LOCK: INTERNAL TOOTH, HEAVY, OPERATING YOKE, 3/8 IN. SCREW SIZE 923501 (20988)		EA	2	•	•	•	•	•	•	•	•	D3	39

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1-YR ALW PER 100 EQUIP CNTGY	(9) DEPOT MAINT ALW PER 100 EQUIP	(10) ILLUSTRATION (a) FIG. NO.	(b) ITEM NO.
P F	5315-243-1159	KEY, WOODRUFF: OPERATING SHAFT, 1/4 IN. 188733 (11083)		EA	2	•	•	•	•	•	•	•	•	D3	40
X2F	3010-423-8041	SHAFT, OPERATING 2757 (61208)		EA	1									D3	41
X2F	3010-128-2701	YOKE, OPERATING 1037 (61208)		EA	1									D3	42
X2F	5340-282-4986	RING, SNAP, EXTERNAL: CLUTCH SHAFT A1002 (61208)		EA	1									D3	43
X1		SHAFT, CLUTCH A3026 (61208)		EA	1									D3	44
P O	4730-048-1788	FITTING, LUBRICATION: CLUTCH, 1/4 IN. NPTF 6026 (03990)		EA	1	•	•	•	•	•	•	•	•	D3	45
P F	5305-475-0630	SCREW, CAP, HEXAGON HEAD: HEAT TREAT, CLUTCH BEARING RETAINER, 5/16-18 THD SIZE, 5/8 IN. LG M2001E (61208)		EA	4	•	•	•	•	•	•	•	•	D3	46
P F	5310-167-0721	WASHER, LOCK: INTERNAL TOOTH, RING, ADAPTER, CLUTCH BEARING RETAINER, 5/16 IN. SCREW SIZE MS35333-41 (96906)		EA	14	•	•	•	•	•	•	•	•	D3	47
X2F	3040-447-8831	RETAINER, BEARING A1181 (61208)		EA	1									D3	48
X1		BEARING, CLUTCH, OUTER 309SFCODETLO (38443)		EA	1									D3	49
P O	4730-050-4203	FITTING, LUBRICATION: CLUTCH, 1/4-28 THD SIZE 6009 (03990)		EA	2	•	•	•	•	•	•	•	•	D3	50
X1		HOUSING: NO. 6 SAE 8539 (61208)		EA	1									D3	51
P F	5306-225-8502	SCREW, LOCK, HEXAGON HEAD: HEAT TREAT, ADAPTER AND RING MTG, 5/16-18 THD SIZE, 1 1/2 IN. LG MS90725-38 (96906)		EA	6	•	•	•	•	•	•	•	•	D3	52
X2F		RING, DRIVING 6939 (61208)		EA	1									D3	53
M F		WIRE, LOCK: SCREW RETAINING, ADAPTER QQW423 (81348) MANUFACTURE FROM:		SL	1									D3	54
P F	9505-242-7527	WIRE, STEEL, 18 GAGE X 18 IN. LG				•	•	•	•	•	•				
P F	5306-853-2228	BOLT, MACHINE, HEXAGON HEAD: HEAT TREAT, ADAPTER MTG, 5/16-18 THD SIZE, 1 1/4 IN. LG MS51035-335 (96906)		EA	4	•	•	•	•	•	•	•	•	D3	55
X2F		ADAPTER: FLYWHEEL 104794 (20988)		EA	1									D3	56
X1		BEARING, CLUTCH, INNER 205SFCODETLO (38443)		EA	1									D3	57
		GROUP 04 - CONTROL PANEL													
P O	5305-984-4938	SCREW, MACHINE: CONTROL PANEL BOX, NO. 6-32 THD SIZE, 3/8 IN. LG MS35206-228 (96906)		EA	10	•	•	•	•	•	•	•	•	D4	1
P O	5975-280-6079	NUT, LOCK, HEXAGON: CONTROL PANEL BOX MS39081-10 (96906)		EA	1	•	•	•	•	•	•	•	•	D4	2

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P O	5310-432-4466	WASHER, RUBBER; ELECTRICAL INLET PLUG 105009 (20988)		EA	1	•	•	•	•	•	•	•	•	D4	3
P O	5310-432-4467	WASHER, FLAT; ELECTRICAL INLET PLUG 300490 (20988)		EA	1	•	•	•	•	•	•	•	•	D4	4
P O	5935-431-4809	PLUG, WIRE ASSEMBLY 105011 (20988)		EA	1	•	•	•	•	•	•	•	•	D4	5
P O	5310-208-1919	NUT, LOCK, HEXAGON; BOX SUPPORT ANGLE MTG, 1/4-20 THD SIZE 29ME-040 (72962)		EA	4	•	•	•	•	•	•	•	•	D4	6
P O	5305-068-0502	SCREW, CAP, HEXAGON HEAD; BOX SUPPORT ANGLE MTG, 1/4-20 THD SIZE, 3/4 IN. LG MS90725-6 (96906)		EA	4	•	•	•	•	•	•	•	•	D4	7
X20		BRACKET, PANEL 104965 (20988)		EA	1									D4	8
P O		DAMPENER, PANEL 105007 (20988)		EA	1	•	•	•	•	•	•	•	•	D4	9
X20		BOX, CONTROL PANEL 104968 (20988)		EA	1									D4	10
P O	6150-405-2211	WIRE ASSEMBLY; START SWITCH TO HOURMETER 105015 (20988)		EA	1	•	•	•	•	•	•	•	•	D4	11
P O	6150-428-7518	WIRE ASSEMBLY; HOURMETER TO OIL PRESSURE GAGE 105017 (20988)		EA	1	•	•	•	•	•	•	•	•	D4	12
P O	6150-405-2205	WIRE ASSEMBLY; RUN-STOP SWITCH TO START SWITCH 105012 (20988)		EA	1	•	•	•	•	•	•	•	•	D4	13
P O		WIRE ASSEMBLY; RUN-STOP SWITCH TO OIL PRESSURE SWITCH 105013 (20988)		EA	1	•	•	•	•	•	•	•	•	D4	14
P O		WIRE ASSEMBLY; RUN-STOP SWITCH TO AMMETER 105016 (20988)		EA	1	•	•	•	•	•	•	•	•	D4	15
P O	6150-405-4825	WIRE ASSEMBLY; RUN-STOP SWITCH TO OIL PRESSURE GAGE 105014 (20988)		EA	1	•	•	•	•	•	•	•	•	D4	16
P O	5305-889-3000	SCREW, MACHINE; CONTROL PANEL COVER MTG, NO. 6-32 THD SIZE, 1/2 IN. LG MS35206-230 (96906)		EA	6	•	•	•	•	•	•	•	•	D4	17
P O	6645-089-8842	METER, HOUR MODEL771 (26992)		EA	1	•	•	•	•	•	•	•	•	D4	18
P O	5310-579-0079	WASHER, LOCK; INTERNAL TOOTH, CONTROL PANEL COVER MTG, NO. 6 THD SIZE MS35333-37 (96906)		EA	6	•	•	•	•	•	•	•	•	D4	19
P O	2815-786-1564	DAMPENER; HOURMETER M3800 (57733)		EA	1	•	•	•	•	•	•	•	•	D4	20
P O	6620-056-9584	GAGE, OIL PRESSURE 505T (57733)		EA	1	•	•	•	•	•	•	•	•	D4	21
P O	6625-272-9928	AMMETER 35R (57733)		EA	1	•	•	•	•	•	•	•	•	D4	22
P O	5930-655-1582	SWITCH, TOGGLE; ENGINE RUN-STOP MS35059-23 (96906)		EA	1	•	•	•	•	•	•	•	•	D4	23
P O	5930-655-1521	SWITCH, TOGGLE; OIL PRESSURE MS35058-29 (96906)		EA	1	•	•	•	•	•	•	•	•	D4	24

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P O	5930-695-1522	SWITCH, TOGGLE: ENGINE START MS35058-30 (96906)		EA	1	•	•	•	•	•	•	•	•	D4	25
X20		PLATE, INDICATING 104972 (20988)		EA	1									D4	26
X20		COVER, CONTROL PANEL 104967 (20988)		EA	1									D4	27
		GROUP 05 - BATTERY AND BATTERY BOX													
P O	5310-695-7145	NUT, LOCK, HEXAGON: BATTERY TRAY MTG, 5/16-18 THD SIZE 42NE058 (72962)		EA	12	•	•	•	•	•	•	•	•	D5	1
P O	5310-081-4219	WASHER, FLAT: BATTERY HOLD-DOWN, GROUND CABLE AND CLAMP MTG, 5/16 IN. SCREW SIZE MS27183-12 (96906)		EA	4	•	•	•	•	•	•	•	•	D5	2
P O	5306-753-4322	SCREW, CAP, HEXAGON HEAD: CABLE CLAMP MTG, 5/16-18 THD SIZE, 1 IN. LG MS51095-334 (96906)		EA	2	•	•	•	•	•	•	•	•	D5	3
P O		CABLE, GROUND: BATTERY 105004 (20988)		EA	1	•	•	•	•	•	•	•	•	D5	4
P O	6150-257-4472	CABLE, JUMPER: BATTERY 105005 (20988)		EA	1	•	•	•	•	•	•	•	•	D5	5
P O	5340-432-4021	CLAMP, CABLE: BATTERY TA61157 (84971)		EA	3	•	•	•	•	•	•	•	•	D5	6
P O	5325-432-4739	GROMMET: BATTERY BOX 11022 (98388)		EA	1	•	•	•	•	•	•	•	•	D5	7
P O		CABLE, LEAD: BATTERY 105006 (20988)		EA	1	•	•	•	•	•	•	•	•	D5	8
X20		BOLT, HOLD-DOWN: BATTERY 101643 (20988)		EA	2									D5	9
X20		HOLD-DOWN, BATTERY 104770 (20988)		EA	1									D5	10
P O	6140-057-2553	BATTERY: 12V 2MN11 (88169)		EA	2	•	•	•	•	•	•	•	•	D5	11
P O	5310-984-3806	NUT, LOCK, HEXAGON: BATTERY TRAY MTG, 5/16-18 THD SIZE MS51922-9 (96906)		EA	8	•	•	•	•	•	•	•	•	D5	12
P O	5306-450-0372	MOUNTING, FLEXIBLE BOLT: BATTERY TRAY MTG J46243 (76005)		EA	8	•	•	•	•	•	•	•	•	D5	13
X20		TRAY, BATTERY 104769 (20988)		EA	1									D5	14
P O	5310-208-1918	NUT, LOCK, HEXAGON: HASP MTG, NO. 10-24 THD SIZE AN365-1024A (88044)		EA	4	•	•	•	•	•	•	•	•	D5	15
P O	5305-981-6210	SCREW, MACHINE: HASP MTG, NO. 10-24 THD SIZE, 1/2 IN. LG MS35206-263 (96906)		EA	4	•	•	•	•	•	•	•	•	D5	16
X20		HASP: BATTERY BOX 2033 (78252)		EA	2									D5	17
		GROUP 06 - ROLL AND SHAFT ASSEMBLY													
X		ROLL AND SHAFT ASSEMBLY 104536 (20988)		EA	1									D6	
P F	3895-425-5898	FLEXIBLE MOUNT ASSEMBLY, W/BUSHING 104759 (20988)		EA	2	•	•	•	•	•	•	•	•	D6	1

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P F	5310-680-7528	NUT, LOCK, HEXAGON; FLEXIBLE MOUNT TO FRAME, 3/4-10 THD SIZE AN4E120 (72962)		EA	8	•	•	•	•	•	•	•	•	D6	2
P F	5305-939-9208	SCREW, CAP, HEXAGON HEAD; FLEXIBLE MOUNT TO FRAME, 3/4-10 THD SIZE, 2 IN. LG MS90725-187 (96906)		EA	4	•	•	•	•	•	•	•	•	D6	3
P F	5305-903-7298	SCREW, CAP, HEXAGON HEAD; FLEXIBLE MOUNT TO FRAME, 3/4-10 THD SIZE, 2 1/2 IN. LG MS90725-189 (96906)		EA	4	•	•	•	•	•	•	•	•	D6	4
P F	5365-432-8231	SHIM; FLEXIBLE MOUNT TO FRAME, 1/8 IN. THK 102834 (20988)		EA	2	•	•	•	•	•	•	•	•	D6	5
P F	5365-432-4489	SHIM; FLEXIBLE MOUNT TO FRAME, 1/16 IN. THK 101573 (20988)		EA	2	•	•	•	•	•	•	•	•	D6	5
P F	5365-619-8063	SHIM; FLEXIBLE MOUNT TO FRAME, 22 GAGE THK 102835 (20988)		EA	2	•	•	•	•	•	•	•	•	D6	5
P F	5305-724-5896	SCREW, SET; DRIVEN PULLEY BUSHING, LOCKING, 5/16-18 THD SIZE, 5/16 IN. LG MS51963-82 (96906)		EA	1	•	•	•	•	•	•	•	•	D6	6
P F	3120-432-8116	BUSHING, PULLEY 104798 (20988)		EA	1	•	•	•	•	•	•	•	•	D6	7
P F	3020-425-5830	PULLEY, DRIVEN 4-3V800D (11288)		EA	1	•	•	•	•	•	•	•	•	D6	8
P F	5305-451-1525	SCREW, CAP, HEXAGON HEAD; BUSHING TO FLEXIBLE MOUNT, 3/8-16 THD SIZE, 13/16 IN. LG 101527 (20988)		EA	2	•	•	•	•	•	•	•	•	D6	9
P F	5310-616-7998	WASHER, LOCK; INTERNAL TOOTH, BUSHING ASSEMBLY, 3/8 IN. SCREW SIZE MS35333-42 (96906)		EA	2	•	•	•	•	•	•	•	•	D6	10
P F		BUSHING; FLEXIBLE MOUNT 101534 (20988)		EA	2	•	•	•	•	•	•	•	•	D6	11
P O	4730-172-0034	FITTING, LUBRICATION; FLEXIBLE MOUNT BUSHING, 90 DEG X 1/8 IN. NPTF 6007 (03990)		EA	2	•	•	•	•	•	•	•	•	D6	12
P F	5315-432-4336	KEY; DRIVEN PULLEY, 3/8 IN. SQUARE, 2 IN. LG 010023 (20988)		EA	1	•	•	•	•	•	•	•	•	D6	13
P F	3120-472-8474	WASHER, THRUST; STUB AXLES 101535 (20988)		EA	2	•	•	•	•	•	•	•	•	D6	14
P F	5310-225-6408	NUT, LOCK, HEXAGON; BEARING HOUSING TO ROLL, 5/8-18 THD SIZE MS51922-53 (96906)		EA	12	•	•	•	•	•	•	•	•	D6	15
P F	2530-425-5828	AXLE, STUB, OPEN END 101479 (20988)		EA	1	•	•	•	•	•	•	•	•	D6	16
P F	2530-432-1661	AXLE, STUD, CLOSED END 101478 (20988)		EA	1	•	•	•	•	•	•	•	•	D6	17
P F	3040-425-5897	SHAFT, VIBRATOR 104530 (20988)		EA	1	•	•	•	•	•	•	•	•	D6	18
X2F		ROLL 104532 (20988)		EA	1									D6	19
X2F		HOUSING, BEARING 101481 (20988)		EA	2									D6	20

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P F	5365-472-5295	SHIM; BEARING HOUSING TO ROLL, 26 GAGE THK 101625 (20988)		EA	1	•	•	•	•	•	•	•	•	D6	21
P F	5365-469-3717	SHIM; BEARING HOUSING TO ROLL, 22 GAGE THK 101624 (20988)		EA	1	•	•	•	•	•	•	•	•	D6	21
P F		BEARING; VIBRATOR SHAFT BS21544A3 (36422)		EA	2	•	•	•	•	•	•	•	•	D6	22
P F	5307-431-8986	STUD; BEARING HOUSING TO ROLL, 5/8-18 THD SIZE, 3/4 IN. LG 101532 (20988)		EA	12	•	•	•	•	•	•	•	•	D6	23
P O	4730-050-4208	FITTING; LUBRICATION, VIBRATOR SHAFT BEARING, 1/8 IN. NPTF MS15003-1 (96906)		EA	2	•	•	•	•	•	•	•	•	D6	24
		GROUP 07 - FRAME AND TOWING ATTACHMENTS													
P O	5310-087-4652	NUT, LOCK, HEXAGON; GUARD MTG, 3/8-16 THD SIZE MS51922-17 (96906)		EA	5	•	•	•	•	•	•	•	•	07	1
P O	5305-269-3211	SCREW, CAP, HEXAGON HEAD; GUARD MTG, 3/8-16 THD SIZE, 1 IN. LG MS90725-60 (96906)		EA	5	•	•	•	•	•	•	•	•	07	2
X20		GUARD, BELT 104773 (20988)		EA	1									07	3
P O	5305-253-5614	SCREW, DRIVE; PLATE MTG, NO. 4 X 3/16 IN. LG, TYPE U MS21318-20 (96906)		EA	12	•	•	•	•	•	•	•	•	07	4
X20		PLATE, INSTRUCTION 105025 (20988)		EA	1									07	5
P O	5305-450-0385	SCREW, LOCK, HEXAGON HEAD; COVER PLATE MTG, 3/8-16 THD SIZE, 3/4 IN. LG 967016 (20988)		EA	4	•	•	•	•	•	•	•	•	07	6
P O	5310-595-7237	WASHER, LOCK; INTERNAL TOOTH, COVER PLATE MTG, 3/8 IN. SCREW SIZE MS35333-42 (96906)		EA	4	•	•	•	•	•	•	•	•	07	7
X20		PLATE, COVER; DRIVEN PULLEY 104856 (20988)		EA	1									07	8
P O	5310-732-0558	NUT, LOCK, HEXAGON; SCRAPER MTG, 3/8-16 THD SIZE MS51967-8 (96906)		EA	8	•	•	•	•	•	•	•	•	07	9
P O	5310-209-1962	WASHER, FLAT; SCRAPER MTG, 3/8 IN. SCREW SIZE 61-0542-1 (42280)		EA	8	•	•	•	•	•	•	•	•	07	10
P O	5305-269-3214	SCREW, CAP, HEXAGON HEAD; SCRAPER MTG, 3/8-16 THD SIZE, 1 1/2 IN. LG MS90725-64 (96906)		EA	8	•	•	•	•	•	•	•	•	07	11
P O	3895-425-5901	SCRAPER, ROLL 101465 (20988)		EA	1	•	•	•	•	•	•	•	•	07	12
P O	5310-980-7524	NUT, LOCK, HEXAGON; TONGUE MTG, 3/4-10 THD SIZE 49NE120 (72962)		EA	6	•	•	•	•	•	•	•	•	07	13
P O	5310-763-8921	NUT, HEXAGON; TONGUE MTG, 3/4-10 THD SIZE MS51967-23 (96906)		EA	4	•	•	•	•	•	•	•	•	07	14
P O	5310-838-1702	NUT, JAM, HEXAGON; TONGUE MTG, 3/4-10 THD SIZE MS35691-57 (96906)		EA	2	•	•	•	•	•	•	•	•	07	15

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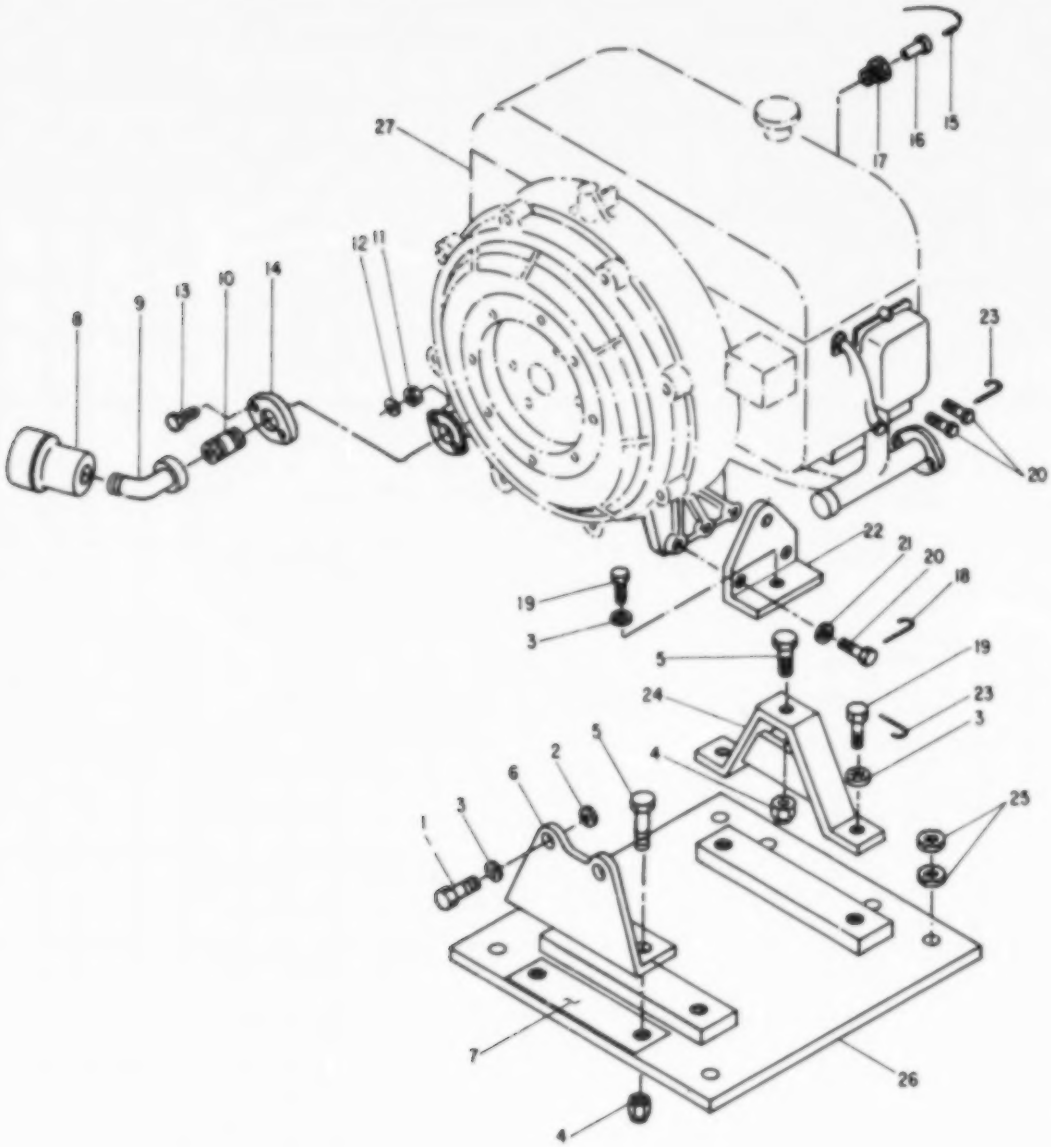
X20		WASHER, BEVELED; TONGUE MTG, 3/4 IN. SCREW SIZE 923618 (20988)		EA	2									D7	16
P O	5305-716-6318	SCREW, CAP, HEXAGON HEAD; HEAT TREAT, TONGUE MTG, 3/4-10 THD SIZE, 2 3/4 IN. LG 963560 (20988)		EA	6	•	•	•	•	•	•	•	•	D7	17
X20		TONGUE, TOWING 104751 (20988)		EA	1									D7	18
P O	5315-187-9600	PIN, COTTER; TOWING EYE, 3/8 IN. DIA, 4 IN. LG MS24665-754 (96906)		EA	1	•	•	•	•	•	•	•	•	D7	19
P O	5310-450-0317	NUT, SLOTTED, HEXAGON; TOWING EYE, 1 3/4 IN. THD SIZE 960433 (20988)		EA	1	•	•	•	•	•	•	•	•	D7	20
P O	5310-432-8806	WASHER, FLAT; TOWING EYE, 1 3/4 IN. SCREW SIZE 923150 (20988)		EA	2	•	•	•	•	•	•	•	•	D7	21
X20		EYE, TOWING 104750 (20988)		EA	1									D7	22
X20		PIN, STAND 925128 (20988)		EA	2									D7	23
X20		STAND 104843 (20988)		EA	2									D7	24
X20		PLATE, IDENTIFICATION 105023 (20988)		EA	1									D7	25
X20		PLATE, TRANSPORTATION 105024 (20988)		EA	1									D7	26
X27		FRAME, ROLLER 104764 (20988)		EA	1									D7	27



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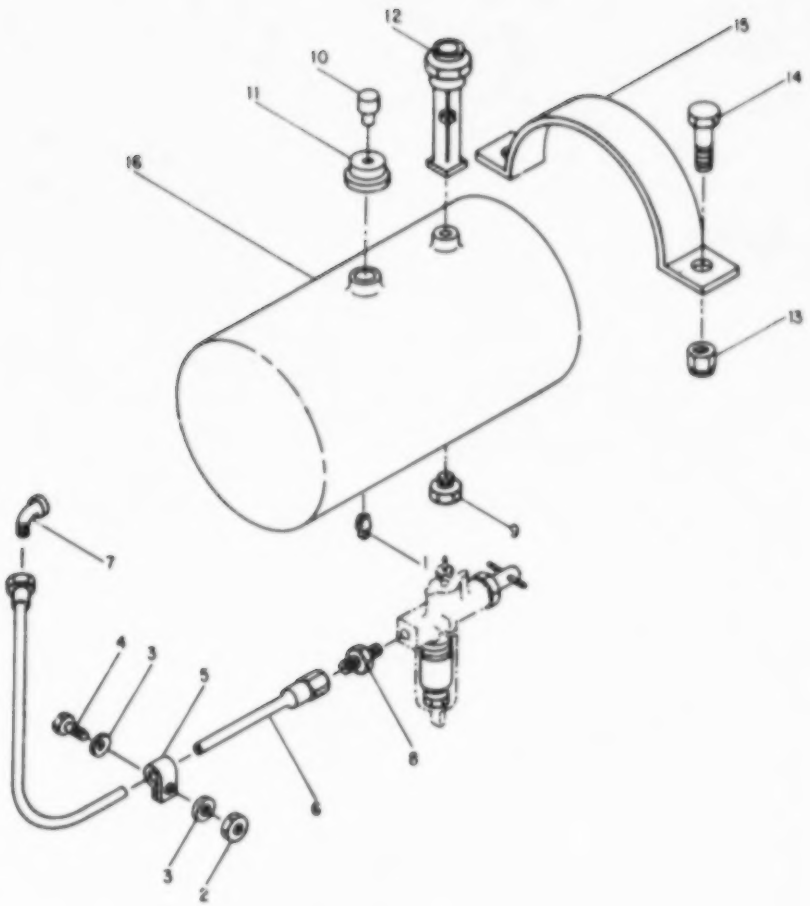
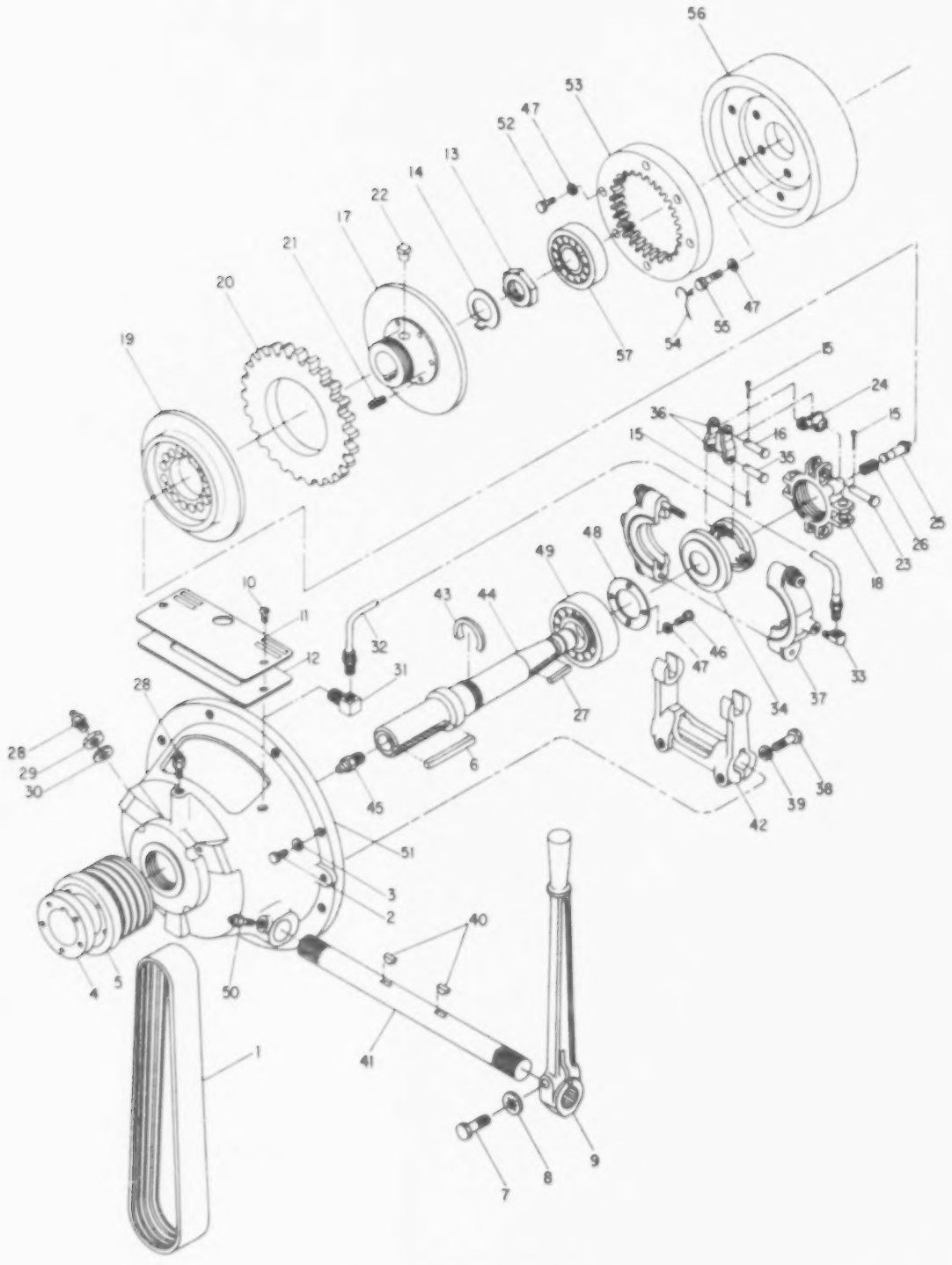
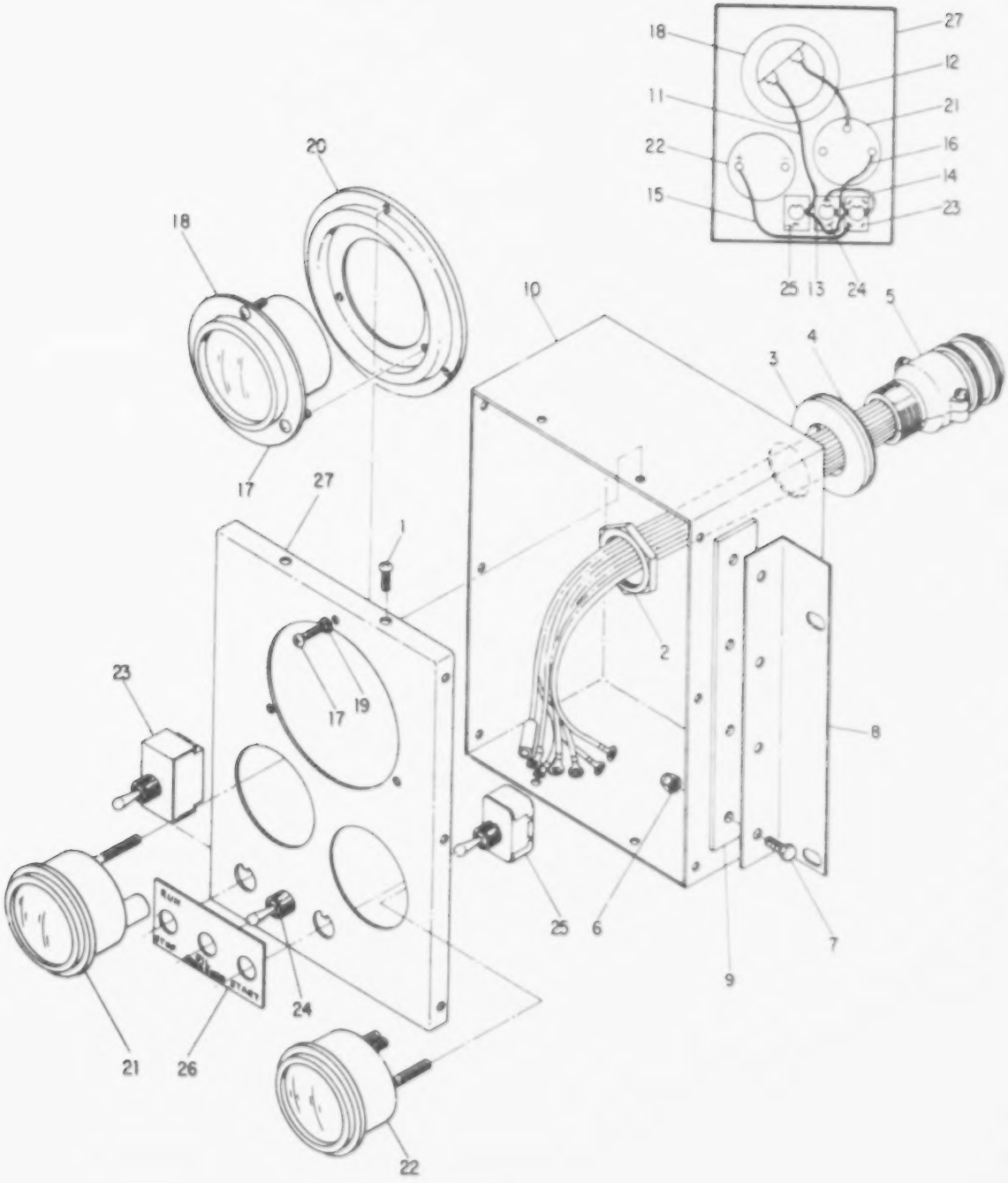


FUEL SYSTEM ME 3895-341-14/02



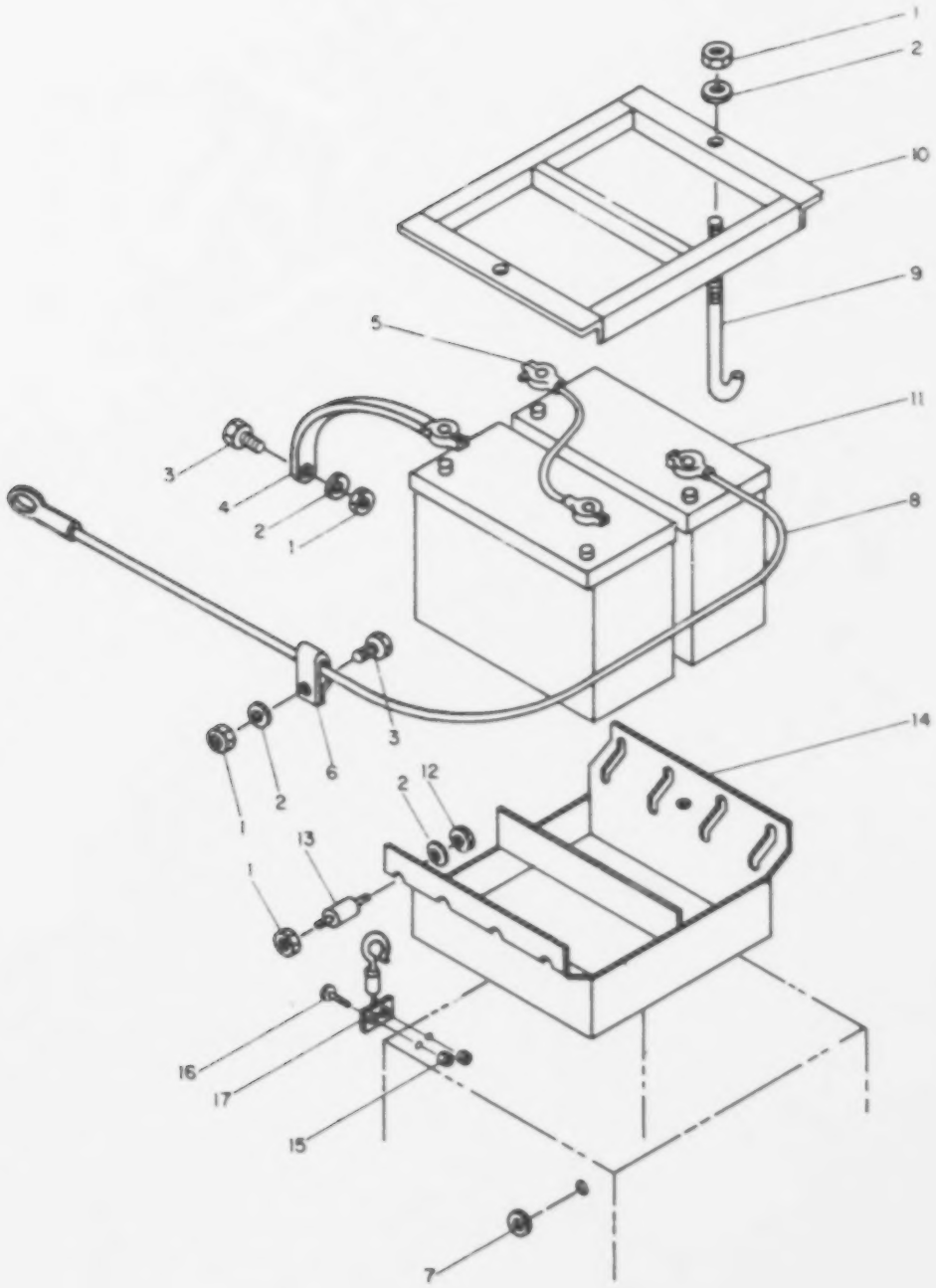
POWER TAKE-OFF ASSEMBLY

ME3895-341-14/03



CONTROL PANEL

ME3895-341-14/D4



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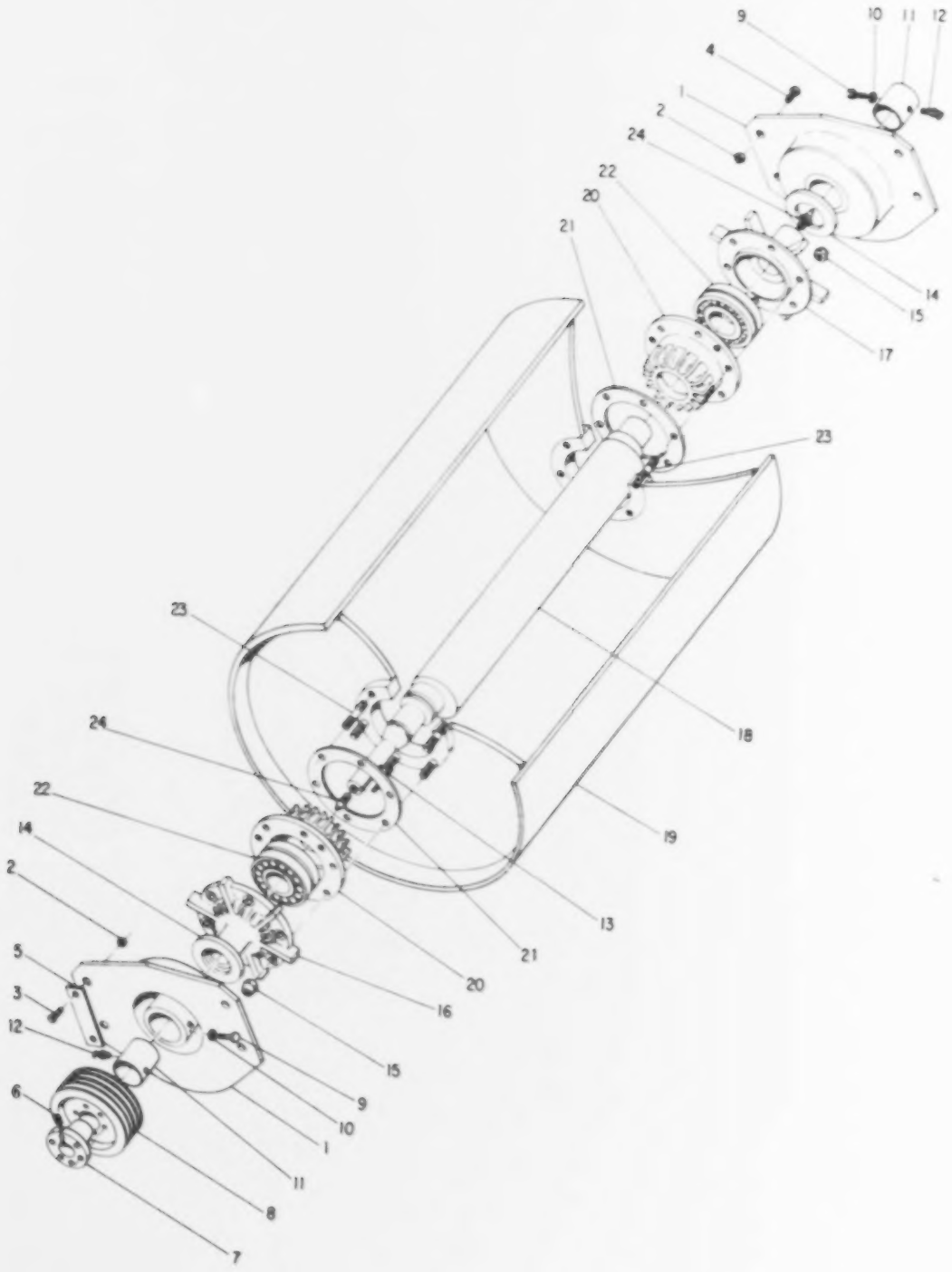
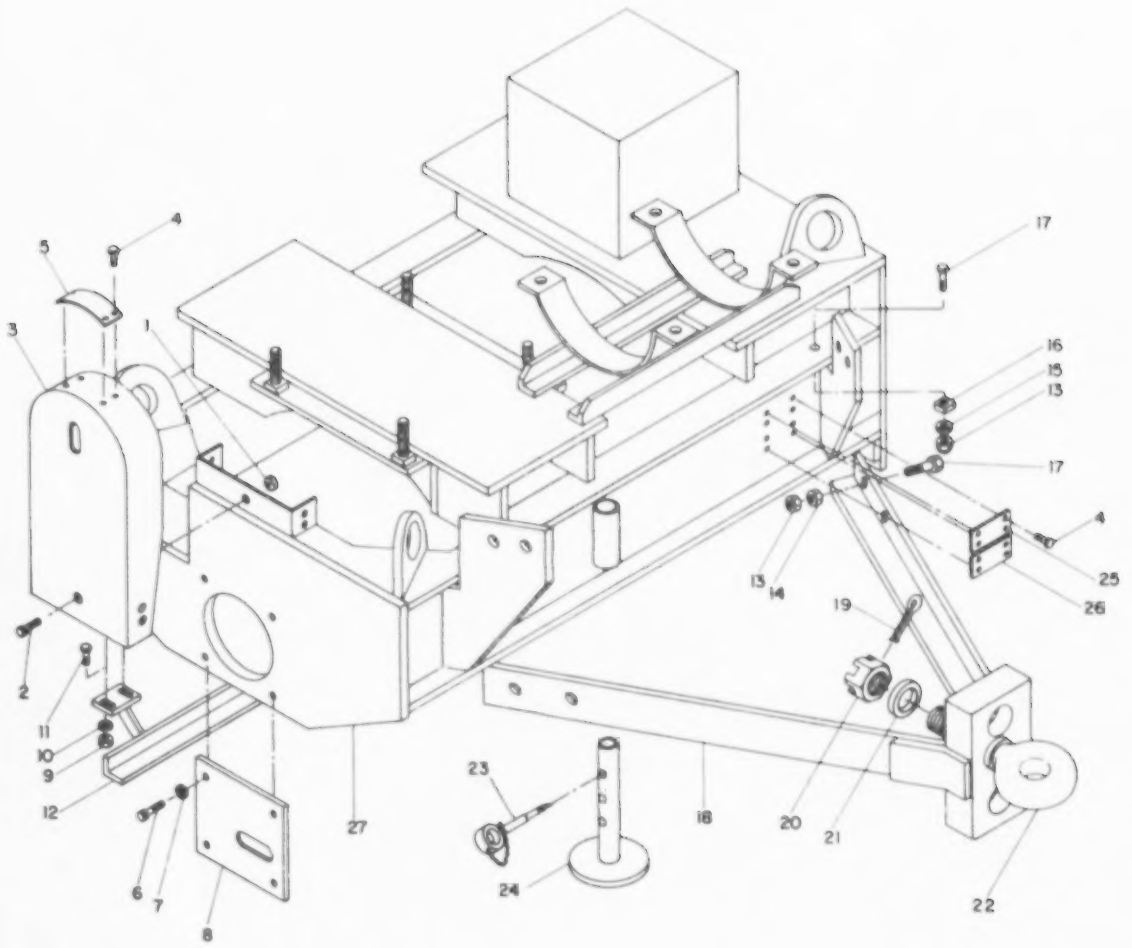


ROLL AND SHAFT ASSEMBLY

ME 3896-341-14/06



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3040-447-8831	D3	48
3040-653-9200	D3	9
3120-432-8116	D6	7
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3895-425-5898	D6	1
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5305-253-5614	D7	4
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5310-225-6408	D6	15
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	D3	3
5310-595-7421	D1	6
5310-616-7998	D6	10
5310-637-9541	D1	12
5310-655-7145	D2	2
	D5	1
5310-655-7423	D3	29
5310-680-7524	D6	2
5310-732-0558	D1	11
	D7	9
5310-763-8905	D2	13
5310-763-8921	D7	14
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5310-980-7524	D7	13
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6150-257-1472	D5	5
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A2286	61208	D3	21
A3024	61208	D3	17
A3026	61208	D3	44
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	96906	D6	10
	96906	D7	7
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	96906	D3	30
MS35338-48	96906	D2	3
MS35691-57	96906	D1	25
	96906	D7	15
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MS51095-334	96906	D1	20
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MS51095-335	96906	D3	55
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8539	61208	D3	51
911004	20988	D2	7
911111	20988	D1	9
911236	20988	D2	9
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923180	20988	D7	21
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